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A Consideration of Edema*

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DROPSY is a symptom that is likely to prove alarming to the average patient, and is perhaps as potent an incentive for him to consult a physician as anything that could occur. It was known to the ancients. Hippocrates offered some very sound advice as to its treatment. His directions included a dry diet and, if the patient were reasonably young and strong, bleeding from the arm, two measures that are used with benefit today.

By edema is meant a pathological increase in the amount of intercellular fluid, which manifests itself first as a rule by an increase in weight, and later by recognizable swelling which pits on pressure, and at times by collections of fluid in the serous cavities.

There are three general types of edema which differ somewhat in their mechanism and in the measures which should be employed to combat them. These are the edemas due to toxins, to osmotic disturbances and to stasis.

Toxic edema is edema caused by damage to the very delicate endothelial barrier that lies between the plasma and the fluid in the tissue spaces, that is, the capillary walls. The damaged capillaries are more permeable and allow the passage of more fluid and crystalloids and of more protein, which is ordinarily retained within the vascular bed. Thus the edema fluid of acute nephritis contains about one per cent of protein. Acute

nephritis, in fact, is the head-man among the causes of toxic edema, and this edema is spoken of as "nephritic edema." It will be noted that in this disease the edema occurs very early and manifests itself first as a rule in the loose areolar tissue of the eye or the prepuce, thus establishing its independence of the factor of stasis, although it is true that later the effect of gravity is noted on the distribution of the edema fluid.

The generalized edemas of some allergic states, of acute alcoholism, and certain other poisonings, are examples of toxic edema, as are the local swellings of acute inflammations, of angioneurotic edema, and of snake venom.

THE treatment of toxic edema is clearly an endeavor to rid the patient of the cause of the toxemia. In acute nephritis there is usually a streptococcal infection to combat. Personally I am not in favor of strict limitation of fluid in this disease. The edema is not the most severe indication as a rule, and in the presence of a febrile disturbance 1500 to 2000 cc. of fluid are usually needed and well tolerated. Part of this may be milk in spite of the sodium chloride that it contains. The rest should include some fruit juices with lactose. Blackfan¹ has shown that the convulsions in the acute nephritis of children is usually dependent upon edema of the brain and can be successfully treated by the use of hypertonic solutions intravenously (mag. sulph. 1%) and magnesium sulphate by mouth.

* Read before the South Shore Medical Society, Bayshore, N. Y., February 15th, 1933.

Of edema due to osmotic disturbances, the best known example is Epstein's nephrotic edema. This type of edema is caused by a lowering of the osmotic pressure in the plasma through a reduction of its protein content. Ordinarily, the delicate capillary endothelium tends to resist the passage of fluids from within, in spite of the predominant mechanical pressure from that side, because the colloids, that is, the proteins, in the blood, refuse to let go of the water and they cannot themselves pass through the endothelium (Starling). If the amount of protein in the plasma is reduced below a certain point, this influence is so diminished that the fluid leaks through in excessive amounts, with the formation of edema.

THUS the albuminuria of nephrosis and of certain types of chronic nephritis is directly responsible for the protein-poor blood that leaks through into the tissues. Fishberg² credits Bright's collaborator, Bostock, with this discovery. It was, however, not proven until the researches of Epstein³ and those who have followed him. It is now known that edema occurs if the protein gets below about 5 per cent, or the albumin below 3.5 to 4 per cent. Leiter⁴ has recently reproduced this type of edema in dogs by repeatedly bleeding them, washing the corpuscles and returning these together with Ringer's solution instead of their own plasma. He can predict very accurately when edema will occur by the degree of hypoalbuminemia. One factor that in the past has contributed very heavily to the frequency and degree of nephrotic edemas was the common clinical habit of restricting protein in the diet in most forms of nephropathy and in all hypertensive patients. Epstein has shown that patients with nephrosis are greatly benefited by a high protein diet. Taking a leaf out of Epstein's book, McCann,⁵ McLester,⁶ and certain other modern clinicians are advocating high protein feeding for all types of nephritis. McLester gives about 120 gm. of meat a day to patients with acute nephritis. The optimum remains to be worked out, though I must confess that the radical advice cited seems unwise to me.

Inadequate amounts of protein in the diet were responsible for the war edema of the starved Germans. It probably contributes to the edema of the rice-eating beriberi patients we see in the ship service at the Long Island College Hospital. It was found by Youmans⁷ to account for the epidemic edema among the poor whites of the Tennessee mountains. Every once in a while you will find it contributing to the discomfort of some patient with heart disease who has been in the hands of an over-enthusiastic vegetarian.

THE third type of edema is the edema of stasis, typically found in heart disease and in the legs of patients with varicose veins. It is caused by increased intracapillary pressure plus some stretching and chemical damage of the capillary walls caused by inadequate blood movement. The edema fluid in this type of edema contains about half as much albumin as nephritic edema fluid, that is, about 0.5% (Fishberg). Clinically the edema of stasis tends to appear in the dependent portions of the body, in the legs of an ambulatory patient, in the lower back of a bed patient. There are usually other evidences of disturbed circulation, as dyspnea, with basal râles in the lungs, enlarged liver, cyanosis, etc.

The treatment of the edema of stasis is usually the treatment of congestive heart failure, in which the index of success is the control of the edema. In patients suffering from this condition rest in the horizontal

position if possible is the first indication. Rest for heart patients nearly always means some help at first with sedatives; morphine is invaluable in this connection. Hippocrates' old advice to prescribe a dry diet is most important and is the measure which I find most often forgotten. A fluid intake cut down to 600 to 1200 cc. will, with rest, clear up many cardiac edemas quite promptly. In the matter of diet, Dr. Fred Smith⁸ has shown that a laboring heart will profit by a generous supply of carbohydrate. If there is difficulty in administering sufficient starches and sugars, it can sometimes be given easily in the form of milk sugar or some of the baby foods such as dextrimaltose or Mellin's food, using quite concentrated solutions. In severe cases 20 to 50 cc. of 50% glucose by vein once a day for a few days is of great help (Marvin).⁹

OF the drugs, one turns first to digitalis, using it much after the fashion advocated by Withering about 150 years ago, that is, pushing it rather rapidly up to its physiological limit. May I remind you that with modern preparations this amounts to about 1½ minims of the tincture per pound of body weight. A common error is to forget that a minim is equivalent to about 2 drops. The full amount may be given in the course of two or three days, and then a maintenance dose of about 20 minims a day to replace the amount that is daily excreted or destroyed by the patient. I might say that these important modern facts about the use of digitalis were described in detail in a brilliant paper read before the Associated Physicians of Long Island in 1898 by Dr. William Gibson¹⁰ of Huntington. Digitalis exerts its influence most beneficially in the presence of auricular fibrillation, recognized by its constant irregularity. In this condition we expect to see a pulse of 140-160 brought below 100 within 48-72 hours. This is accomplished by the action of the drug on the bundle of His, blocking off many of the impulses from above. The exact dose of the drug has to be determined in each case by trial and error—too little is shown by failure to obtain results, too much by vomiting, yellow vision, or coupling of the pulse. Occasionally digitalis poisoning causes a very rapid regular pulse.

Now suppose that rest, dry diet and digitalis fail, what else is there to do? The xanthine diuretics, caffeine, theobromine and theocine, are recommended. Theocine is the most active and sometimes produces marked diuresis in doses of 3-4 gr. Like the other drugs of the group it acts on the heart and the kidney. It is quite irritating to the stomach and should not be used more than two days at a time. A less irritating form of theocine is the proprietary metaphyllin (in gr. 1½ tablets, 3 to 8 a day). Theobromine is best used as theobromine sodiosalicylate, gr. v-xv two to four times a day. There are various other salts of theobromine and theophyllin which are on the market as proprietary tablets.

MORE valuable in my experience than the xanthine diuretics are the ammonium salts and mercury, preferably used together. Ammonium chloride, or better ammonium nitrate, is given in rather large doses—about 120 grains a day, giving 20 grains in water every 2 hours for ten hours each day. The ammonium is transformed by the liver into urea, itself a powerful diuretic. Incidentally, the alkali reserve of the body is more or less used up by the acid radical left when the ammonium is metabolized. With the ammonium salts one of the newer mercurial diuretics such as salyrgan may be used intravenously every 3 or 4 days.

(Concluded on page 146)

Symptoms, Diagnosis and Treatment of Cancer of the Colon*

MOSES BEHREND, M.D., F.A.C.S.
Philadelphia, Pa.

NOTWITHSTANDING all the admonitions concerning early rectal examinations for the detection of carcinoma of the colon, there are still many physicians who fail in this particular, since there seems to be a great aversion on the part of physicians to the making of a rectal examination. A case now in the hospital illustrates to some extent the statement just made. The patient tells us that he has been complaining of various symptoms for the past ten years; also that up to about two months ago no rectal examination was made. At that time a well-advanced carcinoma of the rectum was found involving the prostate and bladder. The posterior wall of the rectum was free. The last physician who saw him sent him to the hospital and the patient accepted operation, which was accordingly performed. This case teaches us that when vague symptoms are present, a rectal examination should always be thought of and made, at the time the patient first consults you. This was an advanced case, as are most of the rectal and colon cases that come for operation. A patient with a profound anemia should always put you on your guard, as I have often seen cases in consultation that were treated for a long time for blood dyscrasia when the real condition was cancer. In every case of anemia, do not fail to make a rectal examination. It is no wonder that the cancer death rate is on the increase if rectal and vaginal examinations are neglected in the ordinary routine examination of your patient.

RECTAL bleeding is not by any means the first symptom. The first symptoms of cancer of the rectum and colon are so varied that one can say that there is no such thing as a first symptom; however, it is important that the bleeding should always be investigated. Do not dismiss your patient with the diagnosis of "only hemorrhoids" before satisfying yourself that a carcinoma of the colon has been eliminated. Only a few months ago I operated on a patient sent to me with a diagnosis of appendicitis. I examined the patient; while the patient had some pain in the R.I.F., the diagnosis was not convincing. At operation we found an annular carcinoma of the colon. After the operation the doctor in charge informed me of the patient's symptoms referable to this condition; he failed to make further examinations such as an X-ray of the colon. While no particular harm resulted here by taking out his appendix, the cancer could not be removed at the primary operation because of lack of preparation for the colon operation.

A patient having alternating constipation and diarrhea must always be suspected of cancer of the rectum. Morning diarrhea is also significant of this affection; abdominal distention and visible peristalsis, while late symptoms, should always make one wary of cancer of the colon. Increasing constipation over a period of years after one has enjoyed normal bowel movements is a questionable symptom. Intestinal obstruction in those in the fourth decade and after without a previous operation having been performed is also cause for investigation. In fact any alteration in bowel movement

habits calls for the various aids in diagnosis at our command. Bloody stools with diarrhea are always danger signs and are often late symptoms. Blood mixed with mucus and pus practically confirms the diagnosis of cancer of the rectum, generally too late to help the patient by operation. Ribbon stools are rarely complained of, since patients, unless very intelligent, cannot impart this information.

Colitis is often a forerunner of carcinoma when the colitis is due to polyposis of the rectum. This disease may prove a forerunner of cancer.

DO NOT forget that digital examination in the diagnosis of cancer of the rectum and colon will help you in the great majority of cases because most of the carcinomas can be reached with the examining finger. In other cases where one is suspicious, examination of the abdomen and pelvis and the use of the X-ray will help to make the diagnosis. The protoscope is also important. Frequently there are microscopic blood cells present when frank bleeding may be absent. Occult blood in the stools should not be ignored. Bleeding from hemorrhoids is usually bright red in color, while blood from cancer is darker, and mixed with mucus. In the one the loss of too much blood may be detrimental, in the other, smaller amounts are lost, yet late symptoms of cancer must be looked for. One must differentiate between benign and carcinomatous ulcers of the rectum. A biopsy will determine this point.

It is of interest for you to know that cancer of the rectum occurs earlier in the female than in the male. It is not uncommon now to have cancer in women in the third decade while in men it appears usually in the fourth and fifth decades. Cancer of the colon is more frequent, however, in men than women. Unfortunately, pain is not a common symptom, and there is no doubt that many cases could be detected earlier if the patient had painful defecation. Metastasis to the liver and bones is rare. Sometimes we see small, apparently inoffensive nodules in the liver but these need not deter us from operating upon a patient with cancer of the colon. Likewise enlarged glands are not always secondary to malignancy, but may be due to the inflammatory process that accompanies the lesion. Their enlargement should not delay but rather encourage operation.

THE treatment of cancer of the colon is surgical, or by means of X-ray, or radium. X-ray and radium have their limitations, and should only be used in those cases that come too late for surgery. At times some cases may be favorable for a course of radium, followed by operation; the chances for radical cure by operation, however, must not be lost by the thought that radium or X-ray will cure the patient. The use of these two agencies under my supervision has been of no avail in obtaining a cure of cancer of the colon. Operations for cancer of the colon are now so selective that we can almost assure the patient a favorable outcome.

For all growths at the recto-sigmoid junction, and below this area, we prefer the one-stage abdomino-

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*Read before the Mt. Sinai Hospital Clinical Society, November 15, 1932.

Seeing Double

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Brooklyn, N. Y.

THIS business of seeing double has a great deal more importance, and is much more frequent as a symptom of serious disease, than one might be inclined to think. The mention of double vision has from time immemorial provoked a snicker because of its association with alcoholic conviviality. The apparent seeing of two objects, where in reality only one exists, is usually but the most dramatic of a whole train of symptoms which taken together supply valuable diagnostic pabulum. It is not always easy to elicit a direct admission from the patient that he sees double because the doubling may be so placed that the images actually overlap each other and the patient may describe a blurring instead of an actual separation. The complaint of "blurred vision," then, should be a hint to consider the possibility of diplopia; and particularly is this significant when associated with mental confusion, unsteadiness, nausea, vomiting, headache and ocular distress. These secondary disturbances are for the most part reflex in origin. They are limited to diplopia arising from dissociation of one eye from the other, and do not occur if the double vision is monocular in origin. They are particularly pronounced if this dissociation is variable in amount.

The Forms and Mechanism of Diplopia

Without careful consideration, one might be inclined to dismiss this seeing double without realizing that it is found in many forms and to arise from many mechanisms, so that its interpretation depends on a thorough comprehension of all its manifestations. We are so inclined to feel that the eye is the organ of vision and dismiss the matter without recalling that the actual organ of vision is the occipital cortex. Moreover, the "seeing double" can arise not only from disturbances of the eye, but also from disturbances in the primary nuclei and—it is said—from disturbances in the cerebral cortex, not only in the visual area itself, but also in the visual memory areas and even the higher centers in the frontal lobe.

The *globe* itself may be the source of the two images and the diplopia may have its inception either in the perceptive mechanism of the eye—the retina—or in the optical system of the eye. In either instance, two images may actually be formed. If arising in one eye only, it is termed *monocular diplopia*. In observing an object with a pair of normal eyes, the images of the object are located on corresponding points of the retina in each eye. This makes it possible for the neuromuscular mechanism (extra-ocular muscles and their associated neuron links) to blend them, with the result that they come to our consciousness as a single image. Disturbances of this mechanism cause *binocular diplopia*. Let us consider this classification in a little more detail. Suppose a patient, the subject of organic or functional brain lesion, insists that he sees two objects where one only exists, and suppose we can rule out his eyes and primary centers as the source of the disturbance, then would we not be justified in calling this a cerebral diplopia?

AS an illustration of diplopia arising in the cortex, one might be asked to close one's eyes and simply imagine that one sees one's wife twice. Would this

be a double vision? Diplopia arising from actual lesions in the visual area of the occipital cortex might or might not have its origin in immediate peripheral excitation. In other words, a person with cortical brain disease might theoretically suffer from the delusion that he was seeing double when there was actually no object under observation; or he might suffer from the illusion that there were two objects when one only was present.¹ Besides injuries and new growths, cortical vascular accidents have been said to produce this sort of double vision. In fact, if we analyze the delusions of folks the subjects of senile dementia, we are astonished at the frequency of this symptom—cortical (psychic) diplopia. We must admit, however, that both the reasoning and the facts hardly permit the use of the words cortical diplopia under any circumstances.

Diplopia arising from the *primary centers* is very common because it is from these centers that the ocular muscles are controlled. Paralysis of the extrinsic eye muscles or a spasm of one or more of them may cause a deviation of one eye with the resulting dissociation of corresponding retinal points² and the production of double vision. Vascular accidents, new growths, congenital defects or malformations, certain inflammatory processes such as lues, encephalitis, and other processes, produce this type of diplopia. Of course any disturbance which upsets the balance of the extraocular eye muscles, whether it has its site in the *center*, the *nerve trunk* or the *end organ* of the nerve going to the muscle, may be responsible in the same way as lesions in the *muscle* itself. Obstructions to movements or displacement of the eyeball, as by *new growths* and *injuries* of the orbit, can dissociate the movements of the two eyes and result in double vision. This might occur in one direction of the gaze only.

THIS brings us up to the consideration of diplopia arising in the eyeball itself. It usually affects one eye (at a time)—*monocular diplopia*. Various closely related areas of the retina are connected by cross fibers. It is thought that damage to such cross fibers may prevent the proper synchronization of adjacent retinal elements with the result that each area functions as a separate segment in recording an impression. Thus, two images are transmitted. It is conceivable, likewise, that the retina can give rise to a functional diplopia, but such an idea is of course highly speculative. Double vision has been reported in cases in which a fold in the retina has occupied the region of image formation. Thus two areas of the retina, widely separated in a functional sense but closely approximated by the fold, receive the impression, each transmitting its increment, and give the effect of double vision. It is not easy to comprehend just how this mechanism would come about, because such a fold would have to include both choroid and retina, otherwise the retina would be detached from its blood sup-

¹In these instances the occipital cortex (visual area) is probably not the actual source of the diplopia. The frontal lobe would theoretically be responsible for the purely psychic diplopia (delusion), while the visual memory (pre-calcarine) or association areas (temporal lobe?) would give rise to double vision based on memory of a single object or double object.

²Unless the image falls upon a corresponding area of each retina, binocular vision is not possible. The subject projects the image from the deviated eye in the wrong direction.

ply³ and so rendered incapable of recording clear impressions. Moreover, such a fold would have to occur through the macula if any detailed discrimination were experienced, because peripheral portions of the retina cannot recognize real detail. Such a fold affecting the macula only would have to be extremely minute. A larger fold would be visible ophthalmoscopically. Cyst-like bodies in the retina, or even transparent crystals, could conceivably cause a splitting of the image as would the edge of a prism or lens. In the case of the former, it would require that the contents of the cyst be of radically different index of refraction from the vitreous or retina, otherwise no such splitting would occur. We know, however, that double vision incident to retinal disturbances is relatively very common. Disturbances which are very difficult to see ophthalmoscopically, on account of their small size and slight pigmentary changes, may cause a blurring of vision. If a subject be asked to study a white string held horizontally before him, he will often describe it as two strings, one perhaps thicker and fuzzier than the other. He may get the same effect from looking at an extremely small point of light, particularly if it be rather dim. With larger objects, this sort of doubling brings the images so close together that they overlap and the patient only gets the impression of a blur.

THEORETICALLY at least diplopia could have its origin through changes in the index of refraction of small areas in the vitreous. This might occur with such pathological conditions as cause liquefaction of the vitreous; it might occur with the formation of such cysts as that of the echinococcus, or perhaps with formation of the transparent salt crystals such as cholesterol. In any event it would require that the vitreous area have a radically different index of refraction from that of the adjacent media. The only instance of diplopia arising in the vitreous known to the writer was one occurring after an injury in which an air bubble entered the vitreous. This was only evident for a short time during the period of absorption of the air. Of course foreign bodies such as oil and glass introduced into the vitreous could theoretically produce a split of the entering pencil of light and result in diplopia.

COMPARED to such theoretical disturbances, a relatively common cause of diplopia occurs in eyes in which the crystalline lens is displaced through developmental defect or traumatism so that its edge occupies the pupillary area. In this instance, part of the light reaches the retina through pupil not occupied by the lens, and the part of the light which passes through the lens is deviated, forming another image separate from the first. It is only possible for two sharp images to be formed under certain circumstances when the relation of the size of the pupil and the distance of the object from the subject are just right. It can readily be understood that when the lens of each eye is dislocated there will be four images which could theoretically be seen if the amount and direction of lens dislocation in each eye was not exactly the same, or if there was a disturbance of muscle balance (squint). It is probable that even with these conditions a patient is not ordinarily conscious of four images as he learns to suppress all the images of one eye and to tip his head in such a way as to obviate one of the images of the other eye. He would then be conscious of but one image. It is sometimes possible

to help these subjects very much by keeping the pupil contracted so that the lens edge is avoided. Unfortunately this is not always possible in those cases with congenital dislocation as the myotics do not act in these subjects. The pupils will not contract.

Certain types of disturbances in the anterior chamber could conceivably cause double vision. Cases have been reported in which droplets of oil have entered the anterior chamber through operative wounds. It would be theoretically possible when this condition exists for the droplet to produce deviation of part of the entering light and so create an image separate from that reaching the retina directly.

THE question has often been brought up as to whether or not double vision occurs with double pupil (created by traumatism, inflammatory adhesions, or developmental defect). This has been answered by the simple statement that light entering through the double pupil is brought to a focus on the same point in the retina if the eye is accommodated for the object; but if the accommodation is relaxed, a separate image (though blurred) is formed for each opening in the iris. This is easily demonstrated by looking at a distant light source through two closely approximated pinholes in a piece of cardboard. One image is seen unless a convex lens is interposed, there by neutralizing the accommodative effort of the eye.

Disturbances of the cornea rarely, if ever, result in double vision as the most dense opacities are sufficiently translucent to lose any diaphragm effect they might have, and are sufficiently opaque to destroy partial deviation of an entering pencil of light. Sometimes tear droplets or mucus flocculi may act like minute lenses or prisms and result in enough deviation of the entering light to form double images. Such a condition, of course, is very transient and disappears instantly on winking.

IN evaluating the relative importance of diplopias as diagnostic data, it is well to keep in mind the relation of a patient's age to the symptom. Diplopia may exist at birth with congenital dislocation of the lens, or after instrumental delivery when one eye has been displaced slightly, but of course it is not possible to elicit such a symptom from the subject. The same is true in infants born with squint (whether from paralysis or muscle spasm). When the child is slightly older, however, these muscular deviations may result in diplopia so marked that the child stumbles and falls or does not learn to walk. When the squint comes on as late as three or four years of age, the child may fall a great deal and will show bruises and cuts on his hands and legs from accidents which occur because he cannot discriminate true from false steps. More intelligent children of this age have sometimes described diplopia, particularly if the deviation comes on with diphtheria. A little later in young adult life, diplopia may be the first sign of encephalitis lethargica as the nuclei of the eye muscles are quite frequently attacked by this disease. In this same period or a little later, diplopia should call for a special consideration of syphilis as the etiological factor. In the aged, cerebral vascular accidents may so affect the muscle nuclei as to result in paresis and hence diplopia. These forms of binocular double vision in adults are usually easy to demonstrate if the subject be asked to look at a point of light with both eyes, having a piece of colored glass over one eye. If the head be turned from side to side, the separation of the lights will increase to the side of the affected muscle. This sort of diplopia is easily distinguished from that arising in one eye alone,

³The percipient layers of the retina are nourished by the choroidal vessels. Only the conducting layers (fibers) are supplied by the retinal vessels.

by covering each in turn. There is, of course, no variation in the relation of the true and the false image on turning the head, if the diplopia is monocular. In either of these types there is a greater separation of the images, the further the light is moved away from the subject. This is not so, however, if the diplopia is psychic in origin. The subject of a mild muscular imbalance⁴ may see double when under the influence of alcohol or when debilitated by sickness. In the first of these instances the drug causes muscular incoordination and exaggerates that which already exists, whereas with debility the general decrease in muscle tone exaggerates that which is present. It occasionally happens that double vision appears in patients the subjects of slight eye muscle imbalance when the vision in a previously sound eye has been decreased to correspond with the blurred vision of a previously defective eye. In this instance two blurred images of equal value are seen, whereas originally one blurred image could be satisfactorily suppressed, and so not observed.

In order to comprehend the full meaning of these various forms of diplopia and the significance of the secondary symptoms to which double vision gives rise, a few simple experiments will be very helpful and entertaining.

Experimental Diplopia

Frontal Lobe Diplopia (?) Close your eyes and imagine you see two images of some entirely imaginary number. It is hard to pick out some object or number not dependent on association. One might imagine that one sees one's own father twice. It would of course be impossible to have two fathers, so that in this sense the double vision would be entirely imaginary but is nevertheless related to associated memories of one's father. It must be admitted that there are many objections to calling this diplopia, but it is an interesting speculation.

Association Areas If one looks at a pencil and then closes one's eyes and calls up an image of two pencils exactly similar to the one in one's hand, one might be considered to have called up a diplopia arising through association.

Another method which might be said to produce diplopia from the association area is to have someone ring a bell twice. We could visualize two bells identically alike, which would arise through association of the sound.

This again is stretching things a bit too far, but by so doing we are enabled to include all of the perceptive mechanisms for consideration. We really know too little of the physiology of these areas to admit of their discussion.

Primary Centers (Binocular Diplopia) Perhaps the best experimental evidence of a diplopia arising from the primary centers would be disturbed fusion (disturbed blending of images). If, while gazing at a small point of light (ophthalmoscope bulb) from a distance of ten feet, a small glass rod be held horizontally before one eye, the image of the light in that eye will be converted into a vertical streak. It will then be seen (with very few exceptions) that the original light does not coincide with the streak. The images of the light no longer being similar in each eye, the tendency to blend or fuse⁵ them is lost, with resulting diplopia.

Diplopia artificially created by disturbing the normal

functioning of the primary centers can be brought about by holding a pencil at arm's length before our eyes. If we gaze past this pencil at a picture on an opposite wall, we will be conscious of two pencils. This is because we have thrown our eyes out of line for the pencil. The images now fall on two dissimilar points on the retina and each is transmitted to the brain as coming from a different point in space. If, however, we look directly at the pencil, we should see two pictures. This is for the same reason (Visual lines are not directed toward the picture, with the result that the image is formed on disassociated portions of the retina).

Displacement of the Globe (Binocular Diplopia) We can also cause dissociation of corresponding points in the retina by displacing the eyeball with the finger. This is best done by gently elevating one eyeball by pressing against the lower lid of one eye with the finger, being careful to keep both eyes open. The diplopia in this instance is vertical (the most distressing form of double vision). If one tried to walk about while doing this, one would suffer a peculiar vertigo and perhaps also nausea. These secondary disturbances are most marked when an effort is made to study detail. It thus comes about that an attempt to eat may cause nausea and a disgust for food. In one instance a frail old lady nearly died from starvation before the expedient of covering one eye restored her appetite and good health.

Displacing the Visual Line—(Binocular Diplopia) The visual line of one eye may be displaced relative to that of the other eye by placing a strong prism before one eye, or perhaps more conveniently a rather strong eyeglass can be held before one eye but not the other, in such a position that the eye covered by the glass sees through the edge, not its center.

Dislocated Lens—(Monocular Diplopia) It is more difficult to demonstrate monocular diplopia. We can imitate a dislocated lens or the tear-drop by placing the edge of an eyeglass or a prism before the eye (opposite eye closed) in such a way that its edge bisects the pupil. If a distant light be regarded under these conditions, it will be seen double. These conditions are frequently created by badly adjusted bifocal eyeglasses.

Double Pupil—(Monocular Diplopia) We can duplicate the effect of double pupil by taking a small piece of black paper and punching two pinholes in it about 1 mm. apart. If we look at a distant light through these holes, we see but a single light; but if we place a strong magnifying glass against the piece of paper in order to destroy the effect of accommodation, we will then see two lights.

While it is not practical to give a detailed discussion of the mechanism of each of these forms of diplopia, it is hoped that the foregoing has made obvious the great diagnostic significance which this commonly neglected symptom affords.

23 Schermerhorn Street.

Treatment of Carcinoma of Cervix

On scanning the literature since 1900 on the treatment of cancer of the cervix, Thomas E. Jones, Cleveland (*Journal A. M. A.*, Sept. 10, 1932), found that three periods are represented. During the first period the surgical treatment was emphasized and the reports consisted chiefly of descriptions of operations and surgical end-results. Then there was the period of controversy concerning the relative merits of surgery and radium. During the past ten years in this country and with few exceptions on the continent, most of the literature has dealt with radiation therapy, its technic and the end-results. An analysis of these results would seem to indicate that, for the time being at least, radium and the roentgen rays are the treatment of choice, not only from the standpoint of the rate of curability, but also from the standpoint of palliation, morbidity and economy.

⁴"Muscular imbalance" is a term used to denote an incoordination of the extraocular muscles.

⁵The word "fuse" has been in use in ophthalmic literature for years to describe the blending of images. It is more than likely an expression used to make facts fit a theory.

Preretinal Hemorrhage

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THIS type of hemorrhage is usually unassociated with inflammation, occurring as a rule spontaneously, but may be the result of trauma. It is most often formed at or near one of the larger retinal vessels and generally in the region of the macula. It may take on almost any size and shape and is located directly under the internal limiting membrane. The cellular portion of the retina is not invaded and for



Preretinal Hemorrhage

this reason the prognosis for the recovery of normal vision is good.

The preretinal hemorrhage sometimes breaks through the internal limiting membrane of the retina, pressing forward until it finally gets between the retina and the vitreous (subhyaloid hemorrhage). The connection between the retina and the vitreous is very delicate at this part of the fundus and therefore a hemorrhage at this point finds no difficulty in seeping its way between the tissues.

HISTORY

Mrs. A. F. K., aged forty-five years, white, American born, has never worn glasses and gives no family history of any eye disease. Mother died at 70 years of age from "kidney disease." Father died of organic "heart trouble." November 22nd, 1925, was compelled to take care of her son after a tonsil operation for three hours, before the nurse arrived. This experience seemed a great strain and was followed by some mental and physical depression. The following day while reading she noticed a peculiar shadowy film before the right eye which as far as she could tell came on gradually. This condition persisted and she consulted me on November 24th, 1925. Pupils were 4 millimeters in size and they reacted to light, accommodation and convergence, as well as consensually. The tension was normal.

Vision O.D. 8/200 unimproved with glasses.

O.S. 15/20—25 sph. — 0.50 cyl. axis 45 15/10.

FUNDUS EXAMINATION

O.D.—The media were clear, and the disc oval. 12 x 14 mm. scleral ring all around and choroidal ring around edge of disc, eccentric excavation out, vessels long axis 90°. There was a large reddish hemorrhage about 30 x 40 mm. in the macular region. The hemorrhage did not reach to the nerve head. The upper edge was flat and the lower margin curved. There were several smaller hemorrhages at the lower margin of the mass. The center of the hemorrhage was darker than the margin.

O.S.—Fundus normal. Field of right eye revealed a small scotoma, otherwise normal for color and form.

Weight $141\frac{1}{2}$ lbs.

Height 68 inches.

Blood pressure 105.

Pulse 96.

EXAMINATION OF BLOOD:

The Wassermann reaction was negative using both a cholesterinized antigen and a plain alcoholic extract antigen.

Von Pirquet test was negative.

Examination of Blood (Count)

RED CELLS	5,020,000
Leucocytes	4,400
Haemoglobin	98%
Color Index	0.9
DIFFERENTIAL COUNT:	
Polynuclear	60%
Small lymphocytes	33%
Large lymphocytes	7%

Microscopical examination of stained smear shows that the red cells are normal in appearance.

Examination of Blood (Chemical)

Sugar	133	mg. per 100 cc.
Urea N ²	15.2	" " " "
N.P.N.	29.0	" " " "
Creatinine	1.0	" " " "
Uric Acid	1.5	" " " "
Calcium	11.0	" " " "
Chlorides (Sodium)	577.0	" " " "
Cholesterol	155.0	" " " "

Examination of Urine

Quantity	specimen
Reaction	acid
Color	amber
Spec. Gravity	1.028
Albumin	neg.
Sugar	neg.
Acetone	neg.
Indican	neg.

Microscopical examination of centrifuged specimen showed an occasional epithelial cell.

X-RAY EXAMINATION OF THE TEETH January 15, 1926, revealed the following:

There was an advanced absorption of the alveolar process about the roots of all the teeth. The superior right central incisor was a crowned tooth, the root of which was more than half absorbed and completely surrounded by a septic area. The superior left central incisor showed a devitalized tooth and a septic area of

bone absorption over the apex of the root. The superior right first bicuspid was a crowned tooth with a septic apical area which extended down the side of the root to the gingival margin. The inferior left 2nd bicuspid showed a septic apical area. Extraction of inferior left 2nd bicuspid and currettement of root socket. Scraping of remaining inferior left teeth for pyorrhea with post-operative treatments. Extraction of superior right central incisor and currettement of septic area. Removal of root fillings of superior left central incisor and superior right 1st bicuspid, treatments of these roots and re-filling to, and through, the apical openings. Replacement of lost teeth and crowns with artificial substitutes.

EXAMINATION OF RADIOGRAPHS taken November 24, 1926:

The pyorrhea surrounding all teeth appeared almost the same as regards resorption of alveolar process. The apices of one root each of 2nd and 3rd molars appeared to be exposed. (This proved true of the 2nd molar when radiographed with diagnostic wire on February 16, 1927.)

The apical area about the superior left central incisor was slightly increased in size and the superior right 1st bicuspid showed partial absorption of the root surrounded by necrotic bone.

Treatment December 1st, 1926: "Removed the superior right 1st bicuspid and scraped the adjoining surface of the 2nd bicuspid. I located a sequestrated section of necrotic bone above the roots of the 1st bicuspid which I removed; thoroughly curretted the surrounding tissues. There was no antrum involvement. The pyorrhea pocket on the mesial surface of the 2nd bicuspid did not extend to the apex of that tooth, therefore I allowed the 2nd bicuspid to remain and expect to test at a later date for vitality."

December 7, 1926: Extracted superior left central and curretted socket.

December 15, 1926: Extracted superior left 3rd molar and scraped left 1st and 2nd molars.

February 16, 1927: Superior right 2nd molar tested and found to be vital although diagnostic wire shown in radiograph reached the apical space through the pyorrhea pocket from which there was a pus discharge. Deep scraping of pyorrhea pockets superior right molar followed by treatments to March 4th.

December 3, 1927: Extraction of superior right 2nd molar tooth.

Treatments February 2nd to date. Insertion of superior movable bridge anchored on vital teeth and the extraction of the superior right 2nd molar badly affected by pyorrhea.

The nose and sinuses negative.

A general neurological examination failed to show any pathological changes.

Dr. Evan Evans, who made a complete physical examination, reported negative findings.

December 8, 1927: Vision O.D. 8/200.

The fundus condition is unchanged and patient is now taking ascending doses of potassium iodide.

December 16th: Blood pressure 100. Has had the left 3rd molar tooth removed. There seems to be some slight thinning of the color in the central hemorrhage.

Thermolite for 15 minutes twenty-four inches from the eye.

December 20th: Taking VIII drops of K. I. Vision and fundus unchanged.

December 24th: O. D.—There seems to have been some new bleeding along the upper edge of the hemorrhage. Thermolite 25 minutes fifteen inches from the eye.

December 31st: Iodides were stopped due to a slight rash, and calcium lactate grains V was given in ascending doses.

January 10th, 1928: Vision O. D. 10/200 with definite thinning out of the hemorrhage. Patient is now taking XX grains of the calcium. Thermolite 30 minutes, ten inches from the eye.

January 15th: Calcium XXV grs. per day.

Teeth have all been tested again and all are reported vital.

Fundus shows continued absorption of the mass with radiating yellowish white lines appearing along the lower edge.

January 20th: Vision O. D. 15/200.

The calcium lactate has been causing indigestion so it was stopped. Thermolite 30 minutes at ten inches.

February 3rd: Vision O.D. 15/100 with a continued absorption of the hemorrhagic area, but several small punctate hemorrhages are seen near the base.

February 18th: Vision 15/40. At the center of the hemorrhage there is a bluish-white reflex. In the region of the macula several small blood vessels can now be seen.

March 24th: Vision is 15/25. There has been a constant and gradual absorption of the hemorrhage and on June 10th the vision was 15/13 with a — 0.25 sp.— 0.50 cyl. axis 90 15/10 ???

Ophthalmoscopic examination of the fundus at this time failed to show any change of any kind in the area of retina occupied by the hemorrhage.

The rare recurrence of this form of retinal hemorrhage is the most encouraging feature of this disease.

March 10, 1932: Vision O.D. 15/20—O.S. 15/25. With proper correcting glasses vision O.D. 15/10 ⊕ O.S. 15/13.

CONCLUSIONS:

Just what caused this hemorrhage I am not able to say. The strain due to the care of her son hardly seems possible without a history of any previous increase of blood pressure or cardiorenal involvement. There was undoubtedly a very badly infected lot of teeth, but whether or not this was the cause I would hesitate to say. It would therefore look as if this condition was another one of that group in which we must confess our inability to state definitely the exciting cause.
121 East 60th Street.

Iodism

J. O. FIRTH, Chicago (*Journal A. M. A.*, Jan. 14, 1933), believes that at present iodine intoxication is limited mainly to attempts at suicide or to accidental causes. The introduction of solutions and compounds containing large percentages of iodine are used extensively in therapeutics or as opaque substances for radiography of cerebral and spinal spaces, genitourinary organs, uterus and tubes, sinuses and bronchi. Such preparations are potential sources of iodism. Idiosyncrasy to iodine and inevitable errors and accidents of technic may lead to an increasing frequency of these conditions unless the dangers are realized and measures for prevention and treatment are instituted. Severe skin eruptions with varying degrees of catarrhal involvement, mostly in the respiratory tract, or severe gastro-intestinal disturbances or both seem to be the most commonly reported symptoms of iodism. The author suggests that when using chloriodized peanut oil as a therapeutic measure the following precautions should be followed: The patient should be instructed that none of the sputum should be swallowed during the procedure, nor afterward as long as the taste or smell of the oil is recognized. Films should be developed at once and if there is any considerable quantity of the iodized oil in the stomach it should be removed immediately by gastric lavage or induced vomiting and followed by a saline cathartic, and fluids by mouth should be pushed.

A Suggested Outline for An "Annual Report on Health and Physical Education"

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IF WE accept the proposition posited in the modern American philosophy of education, namely, *equality of opportunity for every child in developing to the maximum his capacities, abilities and constructive aptitudes and interests*, we must obligate ourselves to provide equal opportunity for the various types of physically and mentally handicapped children as well as those who may be grouped in the so-called normal part of the pupil distribution.

State, city, village and district school systems have found out, or are finding out, that although the per capita cost of education of handicapped children in various types of special classes is somewhat in excess of that of the average child, yet it is far cheaper than academic failures, repetition of grades, juvenile delinquency, and later, chronic dependency, unemployment, racketeering, criminal activities and various forms of anti-social undertakings. Without special education and appropriate medical service to our various types of school deviates, such is their usual fate, since their adaptability and reactivity to life is restricted and distorted in proportion to the degree they suffer in their attempts to gain satisfaction in life as they have to meet it.

Since in this instance we are dealing with "abnormal" or "sick" individuals, physically or mentally or both, it is tremendously important that they be in the hands of highly trained physicians. The State Education Department of New York State has wisely formulated the dictum, "Health first, then wisdom." The profession that has for centuries specialized in health is the medical fraternity. Although the practice of medicine in its earlier years of service concerned itself with the acutely and chronically ill, yet each year its work is increasingly occupied with the conservation of health, keeping well people well and happy, the prevention of disease and whatever interferes with health, happiness and efficiency.

IT IS therefore highly important that all health work be under the direction of well qualified physicians. Since we are in this matter part and parcel of an educational system it is desirable that the medical director of health in all its ramifications have some pedagogical training. As in the school, business, or any organization, the success or failure of the work primarily and to a very large extent devolves upon the type and quality of the teacher, director or organizer. Therefore, first select your director.

Educational systems which place health secondary to instruction, or fail to select directors in health service and education who are physicians with pedagogical training, are merely deceiving themselves and retarding the best interests of all concerned. Petty prejudices, shackles of tradition, bias, crass selfishness and greed for power must give way sooner or later to critical common sense, the consensus of opinion of the best judges in such matters, and the facts of experience.

What types of deviates have education departments

obligated themselves to educate and develop to their maximum abilities? These may be categorically enumerated as follows:

1. Children assigned to parental schools.
2. Children assigned to disciplinary schools or classes.
3. Classes for deviates in trade schools.
4. Classes for deviates in industrial schools.
5. Schools and classes for subnormal children.
6. Open-air schools and classes.
7. Schools and classes for children with speech defects.
8. Schools and classes for crippled children.
9. Classes for the blind.
10. Classes for children with defective vision.
11. Classes for the deaf and hard-of-hearing.
12. Classes for epileptics.
13. Classes for cardiopathics.

IN SEARCHING for a title of a department or division which would do justice to the type of service to be expected and rendered to such deviates, that of "Health and Health Service" seems most desirable. This seems more worthy of use than "Health and Physical Education," which has enjoyed an extreme swing of popularity largely due to the organization and aerial reverberations of physical educators. The important work of the latter group of educators is not to be minimized, but rather placed in a more common-sense perspective. In some instances the use of the name "Health and Physical Education" has led to the tail wagging the dog. The proposed title would tend to "render unto Caesar the things that are Caesar's" and place all health service and health education under a specially qualified and well trained "physician-educator."

The subdivisions of the department or division of "Health and Health Service" should include (1) School medical inspection, (2) neuropsychiatry, (3) physical education, (4) school nurse teachers, (5) health teaching, and (6) all types of special schools and classes above numerated.

WITH this preamble, the question is raised, "How might the annual report on Health and Health Service contribute to a greater recognition and service (educational, medical and social) to all the children subserved by this important phase of education?" In order to bring about such a desideratum we should bring to the front two aspects of this problem: (1) *Identification* or the *modus operandi* for recognizing, diagnosing, registering and classifying various types of deviates, and (2) *Adjustment* or the program of treatment (medical, educational and social), its operations, and its results. Both of these items should be included in the annual report in order to note the size of the problem, its course or progress, and the modifying factors.

There have been surveys made in various sections of the country which have revealed the startling facts and

f. Flat foot .....	.....
g. Knock knee .....	.....
h. Bow leg .....	.....
i. Equinus .....	.....
j. Lordosis .....	.....
k. Cerebral or apas- tic diplegia .....	.....
l. Congenital dislo- cation of hip .....	.....
j. Other (specify) .....	.....
13. Skin and Scalp .....	.....
a. Pediculosis .....	.....
b. Favus .....	.....
c. Ring worm .....	.....
d. Falling hair .....	.....
e. Alopecia .....	.....
f. Other (specify) .....	.....
14. Nervous System .....	.....
a. Post-encephalitic .....	.....
b. Poliomyelitis .....	.....
c. Erb's paralysis .....	.....
d. Epilepsy .....	.....
(a) Petit mal .....	.....
(b) Grand mal .....	.....
e. Other (specify) .....	.....
15. Abnormal Behavior .....	.....
a. Truancy .....	.....
b. Lying .....	.....
c. Stealing .....	.....
d. Morbid sex curi- osity or sex habits .....	.....
e. Running away .....	.....
f. Temper tantrums or temper spells .....	.....
g. "Fainting" or "spells" or "at- tacks" .....	.....
h. Over-pugnacious- ness .....	.....
i. Seclusiveness .....	.....
j. Boisterousness .....	.....
k. Show off .....	.....
l. Tearfulness .....	.....
m. Stubbornness or sulkiness .....	.....
n. Timidity .....	.....
o. Inability to get along well with others .....	.....
p. Other (specify) .....	.....
16. Mental Deficiency .....	.....
a. Dull normal (slow going), I.Q. 76-90 .....	.....
b. Retarded, I.Q. 75-50 .....	.....
c. Very retarded, I.Q. below 50 .....	.....
17. Speech Defects .....	.....
a. Defective phona- tion .....	.....
b. Stuttering (emo- tionally deter- mined) .....	.....
c. Stammering (due to defective end organs of speech, e.g., cleft palate, harelip, hypertro- phied tonsils, or defects in jaws, teeth, tongue or throat, tongue- tied, polypoidal growths) .....	.....
d. Lisper .....	.....
e. Substitution of let- ters, syllables or words .....	.....
f. Lalling .....	.....
g. Foreign accent .....	.....
h. Nasality .....	.....
i. Delayed speech .....	.....
j. Oral inactivity .....	.....
k. How many of these pupils have been given a spe- cial medical ex- amination to de- termine the cause? .....	.....
l. How many have been examined by the N. Y. State Traveling Clinics for Child Guide- ance, or a psy- chiatrist? .....	.....
m. How many have been examined by a psychologist? .....	.....
n. How many have been given spe- cial instruction by a qualified teacher in speech correc- tion? .....	.....
o. How many chil- dren with speech defects have im- paired hearing? .....	.....
18. Other Defects .....	.....
Total .....	.....

Blind or nearly blind	.....
Deaf or nearly deaf	.....
Crippled or deformed	.....
Epileptic	.....
Seriously abnormal	.....
behavior	.....
Speech defects	.....
Cardiac defects	.....
Mentally deficient	.....

- How many chil-
dren of school age,
in and out of school
are
- How many chil-
dren are attending
special classes for
- How many chil-
dren are
(a) Attending Child
Guidance or
Mental Hygiene
Clinics for
- (b) Private phy-
sicians or hos-
pitals for
- How many chil-
dren are excluded
from school because
of
- How many chil-
dren are excused
from supervised
physical activity be-
cause of
- How many chil-
dren in each group
are in need of medi-
cal or surgical
care?

Were pupils examined by a physician before entering classes for the handi-
capped, or before undertaking competitive or remedial work in phys-
ical education?

Were pupils excused from physical education requirements without a
remedial certificate indorsed or approved by the school medical in-
spector?

Is your school supplied with first-aid equipment?

How many of your teachers have a dental examination twice a year?

Once a year?

How many teachers have a yearly medical examination?

How many teachers have been absent from school on account of sickness
for more than two days?

More than fourteen days?

How many teachers have been granted sick leave of absence during the
past year? (specify length and reason)

School medical inspectors. Number employed at full time?

at part time?

Hours devoted to service by full time inspectors? Daily

weekly

annually

part-time inspectors? Daily

weekly

annually

Amount paid full-time inspectors? \$

part-time
\$

total? \$

Amount paid for expenses of inspectors
and administration of the work, exclusive of salaries? \$

Amount paid in extending relief to defective pupils? \$

Names and addresses of assistant medical inspectors?

Name and addresses of assistant medical inspectors?

1. Do you consider that you have an adequate school medical inspection
service?

2. If not, in what ways is it unsatisfactory?

3. What additions or changes, if any, have you made during the year in
personnel of your medical inspection service?

4. Is a suitable room provided in the school building for school medical
examinations?

School dental service. Amount expended by school board for dental
service? \$

Is a dental dispensary available to the pupils?
If so, how supported?

No. of dentists?

No. of hygienists?

Hours of
service weekly?

If not, has the subject been presented to your
board within two years?

Would you like our latest informa-
tion and suggestions on organizing this work?

Is your school
dental service inadequate?

If so, in what ways?

School Nurse-teachers. What additions or changes, if any, have you
made during the year in the personnel of your health teachers or school
nurse-teachers?

Do you consider that you have an adequate nursing service?

Is a suitable room provided in the school building for school health
service?

What provision, if any, do you make for nurses'
transportation?

Sight saving. Has your medical inspector reported the "near blind"
children on this blank?

Have these children been examined
by an ophthalmologist (physician specially trained in diseases of the eye)?

If you have twelve such children your board can establish
a sight saving class (usually at least one such child occurs in every five
hundred). If your school population is more than five thousand you can
establish such a class. Would you like suggestions for conserving the
sight of your pupils, for example, (1) eye testing?

(2) sight-
saving classes?

Open-air school. Do you maintain open-air schools or open-air school-
rooms?

Number of pupils in attendance?

Total
number of pupils who need such a type of school or classroom due
to being undernourished, predisposed to tuberculosis, or who are in a general
way subnormal physically?

How many of these pupils remain
at school for noonday luncheon?

How many receive a morn-
ing serving of milk daily at school?

Special Class. If you have ten children whose Intelligence Quotient
(I.Q.) is 75 or less your board can establish a "Special Class". If your
school contains less than ten such children contract may be made with
the board of education of another city or school district for the education

¹ Send names and addresses if you wish advice from the Medical In-
spection Bureau.

of such children in special classes organized in the schools of the city or district with which such contract is made. Should you like suggestions as to how to proceed in establishing a "special class" communicate to us your needs. Have children suspected of mental retardation been examined by a psychiatrist or psychologist? (At least one per cent of public school children can be taught only in special classes).

Abnormal Behavior. The Traveling Child Guidance Clinics of the New York State Department of Mental Hygiene conduct clinics throughout the State for the examination and treatment of all types of maladjusted children including those who are not making normal or average progress in school. Have your name placed on the mailing list for the monthly schedule of these clinics by directing your request to the Division of Prevention, Department of Mental Hygiene, Albany, N. Y. You can make appointments to bring children in need of such help to the clinic nearest you by writing to the "field agent" listed on the monthly schedule prior to the date of holding the clinic. (Five to thirty per cent of school children present personality and adjustment difficulties which could be benefited by psychiatric examination and treatment at a Child Guidance Clinic.)

Hard-of-hearing. Has your medical inspector reported the hard of hearing on this blank? Have these children been examined by a physician specially trained in diseases of the ear? (One to two per cent of school children need special training in lip reading or speech reading until they acquire this art).

II. HEALTH TEACHING

Give the name and official position of the person who supervises health teaching in the elementary schools?.....

Is morning inspection made daily? By whom is morning inspection made? In how many schools is a hot lunch served at noon? Who prepares the hot lunch? How many children patronize the lunch room daily? Give the number of children who receive a midmorning serving of milk daily at school. What percentage of children pay for this milk? Who pays the cost of milk for needy children? If not, how frequently are they weighed? Does the classroom teacher weigh them? If not, who weighs them? Is each classroom supplied with the new classroom growth record chart? How frequently are the growth records of children sent to their parents? What are the official positions of the persons who teach hygiene in the seventh grade? eighth grade? ninth grade? Is an adequate supply of water for washing hands and face available?.....

III. PHYSICAL EDUCATION

Did each child receive 120 minutes of supervised physical activity weekly according to the provisions of the physical training law syllabus? How many were excused from physical activity? To what extent are the recess periods organized and conducted by pupils for play activities?.....

(Date).....19..

(Signed).....
Superintendent or Principal¹

PRACTICAL NOTES

The Treatment of Acute Laryngitis

The following prescriptions will be found useful in the treatment of acute laryngitis. The first four are used as inhalations:—

R Ol. cajuput }
Ol. pini sylvestr. }aa. ʒi
Tinct. benzoini ʒi
Eucalyptol ℥ xxx
Sig. Half-a-teaspoonful in a pint of boiling water, and inhale the vapour as directed.

R Ol. pini sylvestr. ʒ ii
Tinct. benzoini co. ʒ i
Magnes. carb. levis ʒ i
Aq. rosae ʒ i
Glycerin. ad ʒ iii

Sig. One tablespoonful in a pint of boiling water, and inhale the vapour as directed.

R Acid. carbol grs. lx
Ammon. chlor. grs. lx
Sp. vini rect. ʒ iii
Aq. destillat. ʒ iii

Sig. A few drops in a pint of boiling water, and inhale the vapour as directed; add a few more drops when the effect of the first begins to disappear.

R Acid benzoici grs. iii
Kaolin grs. xii
Trit. et adde
Aque ʒ ss
Tinct. tolutani ℥ xviii
Agite et adde
Aquam ad ʒ i

Sig. One teaspoonful in a point of boiling water, and inhale the vapour as directed.

The following prescriptions are used as sprays; the first and second are watery sprays and may be sprayed into the pharynx and larynx, holding the tongue out with a towel or gauze swab; the third is an oily spray, and may be sprayed through the nose or directly into the larynx, holding the tongue out with a towel:—

R Sod. bicarb. grs. iii
Sod. bibor. grs. iii
Acid. carbol gr. i
Sacc. alb. grs. v
Sig. Use as a spray as directed, adding the above quantity of powder to ʒ iv of warm water.

R Chlorotone grs. v
Resorcini grs. v
Cocaine hydrochlor. grs. v
Glycerini ʒ iss
Aquam ad ʒ i

Sig. Use in a laryngeal spray as directed.
R Menthol. grs. x
Camphor. grs. iiss
Chlorotone grs. v
Ol. cinnamon. ℥ ii
Paraffin, liq. ad ʒ i
Sig. Use in a laryngeal or nasal spray as directed.

The Treatment of Acute and Chronic Pharyngitis

The following gargles are used in the treatment of acute and chronic pharyngitis:—

R Sod. benzoat. }
Sod. brom. }aa. ʒ iss
Phenazon. }
Sp. menth. pip. ℥ xxx
Glycerinum ad ʒ iv

Sig. The gargle: one to two teaspoonfuls in a half-pint of warm water; use every three hours.

R Sod. salicyl. }
Sod. chlor. }aa. ʒ ii
Sp. anisi ℥ xv
Glycerinum ad ʒ iv

Sig. The gargle: one to two teaspoonfuls in a half-pint of warm water.

R Acid, carbol grs. l
Sod. bibor. grs. lx
Pot. brom. grs. lx
Sp. menth. pip. ʒ ss
Glycerinum ad ʒ iv

Sig. The gargle: one teaspoonful in half-a-tumbler of warm water.

R Sod. benzoatis ʒ ii
Resorcini ʒ iss
Phenazoni ʒ i
Glycerinum ad ʒ viii

Sig. The gargle: two teaspoonfuls in a half-pint of warm water.

—The Practitioner

Renal Function in Arterial Hypertension

LAURENCE B. ELLIS and SOMA WEISS, Boston, (*Journal A. M. A.*, March 25, 1933), used the usual urinalysis, urea and creatinine clearance tests and concentration-dilution tests in a study of the renal function of twenty-four cases of arterial hypertension without clinical signs of cardiac or renal failure, and in eight cases of glomerulonephritis. In ten of the cases of hypertension the urea clearance test gave normal results; in nine there was a slight reduction, and in five it was markedly lowered. Creatinine clearance tests, in eighteen of the same cases, were normal in thirteen instances, slightly reduced in two, and markedly reduced in three. In general, the outcome of the urea and creatinine tests tended to give parallel results. In the twenty-two cases in which the concentration test was performed in the patients with hypertension, the maximum specific gravity of the urine was above 1.025 in six instances; ten times it fell between 1.020 and 1.025; and in the remaining six cases it fell below 1.020. In only two instances did the concentration test show a definite lowering without a marked reduction in the urea or creatinine clearance tests. For practical purposes, in most cases a carefully conducted concentration test is as sensitive an index of renal impairment as the urea and creatinine clearance tests. Marked albuminuria or hematuria was uncommon in hypertension unless great limitation of function was detectable by other tests. The authors analyzed the results of their study in accordance with the filtration-reabsorption theory of renal physiology and correlated them as far as possible with the histologic changes in the kidney, known to occur in hypertension. There was a trend for the degree of impairment of renal reserve to parallel the height of the arterial blood pressure, particularly the diastolic pressure. There was no correlation to be made between the degree of renal damage and the age of the patients, the symptoms or the known duration of the disease.

¹ Cancel word not applying.

The Value of a Complete Urological Examination in Upper Urinary Tract Pathology*

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IT is unnecessary to put forth arguments concerning the value of careful and complete examinations of patients. Such a proposition is accepted as a self-evident fact; but when it presents itself in an individual case there arises the question of just what constitutes a complete or necessary examination in that patient. The purpose of this paper is to consider this question as it relates to upper urinary tract pathology; that is, to give a brief review of the diagnostic methods usually employed and the information obtained through them, the value of such added information in a patient whose condition has already been diagnosed, and the necessity of such procedure in order to arrive at the proper diagnosis in certain otherwise obscure cases.

Pathology of the lower urinary tract will not be considered as such conditions usually give enough local symptoms to force the necessary examinations.

Diagnostic methods in urology are probably as satisfactory as in any branch of medicine. New methods are constantly being reported, and no attempt will be made to describe or even name all of the procedures. The routine examination of a patient in whom pathology of the upper urinary tract is suspected should consist of two main divisions, the preliminary or general and the special. The general examination includes satisfactory history and physical, urinalysis and plain X-rays of kidneys, ureters and bladder. The examination at this point may have brought out enough positive findings to definitely indicate pathology or even to make a diagnosis. It is most important to realize, however, that even though these examinations have been negative there may still be definite urological pathology, and in order to arrive at a final diagnosis the examination should continue with the second or special group of procedures. It may be wise to pause for a moment and consider the general procedures again as to their relative importance. Often the busy physician is apt to attach greater importance to the urinalysis and X-ray reports than to the history and physical examination. When such reports are positive there is no argument against their importance, but negative findings here should not lead him to eliminate urological pathology in the presence of a suggestive history. Such a history and physical examination can be relied upon with more confidence to warrant a complete study, than can a negative urinalysis and X-ray be relied upon to rule out upper urinary tract pathology.

THE special group of procedures includes cystoscopy, ureteral catheterization, collection and examination of urine from each kidney, function tests of each kidney and urography. Such an examination will not only often make a diagnosis when the preliminary examination is negative, but it will give added and necessary information in those cases where a preliminary diagnosis is already made.

The cystoscopy, in addition to showing bladder pathology, will often aid in pointing out pathology in the upper urinary tract; particularly by the appearance of

the ureteral orifices and the mucosa immediately around them. The character of the urine flux or jet may show from which side a gross hematuria or pyuria originates.

Catheterization of the ureters will give evidence for or against obstructions such as calculus, stricture, external pressure, etc. Its principal use is to obtain specimens from each side for examination: culture, microscopic and urea determination being the usual routine tests. The urea determination is a good test of kidney function and is usually supplemented by one of the dye tests such as indigocarmine or phenolsulphonphthalein. These latter tests may be given intravenously and the appearance, time and degree of concentration compared for each kidney.

An X-ray is then taken with the catheters in situ, which outlines the general course of the ureters. The suspected side is now filled with contrast medium, usually sodium iodide solution, and further X-rays are taken with the patient in various positions from Trendelenburg to erect as the case may indicate. Frequently several exposures are made after removal of the catheter to determine the emptying time of the pelvis and ureter.

INTRAVENOUS urography has been in common use during the past three or four years. It is undoubtedly an aid in many cases and it may be the only method possible in certain cases where ureteral catheterization is impossible or contraindicated. However, it cannot be relied upon to give as accurate a picture as the older method nor can it be relied upon always to show the relative functions of the kidneys. The best pictures are obtained when there is some obstruction in the ureter causing retention and concentration above such a point.

As illustrative of the value of such a complete work-up in an ordinary case, the following might be cited: The patient presents signs and symptoms of right renal calculus. The preliminary examinations show occasional pus clumps in the urine, and a dense shadow in the region of the kidney pelvis in the plain X-ray. From these findings a diagnosis of right renal calculus with infection can be made. If the outline of the kidney is clear it may be possible to guess the approximate location of the calculus in relation to the kidney pelvis. The further special examination will demonstrate the presence or absence of infection in the opposite kidney, the functional capacity of each, the exact location of the calculus, the presence of an extrarenal or intrarenal type of pelvis, and the presence or absence of ureteral obstruction. Thus in an ordinary case already diagnosed, the special examinations aid in deciding on operation, the type of operation which can be done, the prognosis and the postoperative treatment; that is, whether ureteral dilations are indicated to aid in preventing recurrence.

ANOTHER group of cases will give findings which definitely indicate urologic pathology although the exact diagnosis of the lesion may not have been made

* Read before the Queensboro Surgical Society, November 21, 1932.

by the preliminary examination. Gross hematuria, persistent pyuria, cystitis which does not respond to ordinary treatment, renal tenderness, pain radiating from the kidney region into the groin, or presence of a mass in the kidney region are such definite sign posts of urologic pathology that there is usually no delay in the

several of them such negative findings are not uncommon.

The following cases illustrate the value of a complete study in such patients:

CASE 1. R.Z. Male, single, 20 years of age. Since age of 8 years has had repeated attacks of pain radiating from loin downwards along flank. Last attack one week ago. Never any bladder symptoms. Urinalysis reported negative and the urine examined on day of examination negative. Plain X-ray of kidneys, ureters and bladder negative. Further study, however, revealed a large right hydronephrotic kidney apparently caused by some obstruction at ureteropelvic junction; phthalein function test too faint to estimate from the involved side, and excellent function from the opposite kidney. Nephrectomy was done which showed a dense band of inflammatory tissue constricting the ureter at the ureteropelvic junction. Recovery was uneventful. The diagnosis was only made because of the complete work-up. The presence of a negative urinalysis and negative flat X-ray is insufficient to rule out urological pathology. In this case the urine undoubtedly would have shown evidence of infection if repeated tests had been made during the acute attacks, although the several examinations that were made were negative.

CASE 2. M.C. Female, 38, married. Frequent attacks of right upper quadrant pain and tenderness; considerable digestive disturbance; never any definite colic or renal type of pain. Urinalysis nega-



Case No. 1

further study of the case. Typical examples of this group of cases are renal tuberculosis, chronic pyelitis or pyelonephritis, pyonephrosis and tumors of the kidney and kidney pelvis. In all these one can expect to find a fairly definite history and physical, and though the plain X-ray may be negative, the urinalysis will usually give further evidence of pathology. In these cases the special examination by means of cystoscopy, pyelogram, function tests, etc., will usually give the complete picture including the exact diagnosis, extent of the lesion, condition of opposite kidney and an idea as to the proper method of treatment. In brief, this group consists of patients in whom the preliminary examination points strongly to upper urinary tract pathology. The special examinations confirm such pathology and give the complete picture.

It is most important to realize, however, that definite pathology can often be demonstrated in patients in whom the preliminary examination has been negative. The preliminary procedures usually considered to be of definite diagnostic importance are urinalysis and plain X-ray, but negative findings in these do not rule out the possibility of upper urinary tract pathology. Any patient presenting symptoms or physical findings suggestive of such pathology should have the complete study. To mention a few conditions where such a possibility might exist: hydronephrosis, nephroptosis, kinking and stricture of the ureter, obstruction at ureteropelvic junction caused by aberrant blood vessels or fibrous bands, uric acid or other non-opaque calculi, solitary cyst, tumors of the kidney and other conditions. In all these the urinalysis and the plain X-ray may be negative and in



Case No. 2

tive. Repeated plain X-rays negative. Gall-bladder pathology was suspected but before operating the surgeon desired a check-up of the urinary tract. The ureteral catheter passed easily to the left kidney but on the right side a smaller catheter was passed with difficulty about 10 cm. only. The iodide solution

caused pain of the same kind complained of and the pyeloureterogram showed definite dilatation of ureter, pelvis, and calyces. In this case the symptoms were due to stenosis or stricture of the lower ureter. Her symptoms entirely subsided following dilatations of the ureter. Here again the correct diagnosis could not be made without a thorough study.

CASE 3. E.B. Female, single, 22. Patient complains of a constant dull ache in right costovertebral angle for several years with recently an occasional attack of severe colicky pain radiating from kidney region into groin. The urine had shown red blood cells at time. The plain X-ray was negative. Here the diagnosis rather definitely pointed to renal pathology, particularly if a specimen happened to show the red blood cells. The pyelogram, however, made a definite diagnosis, showing an accessory calyx with marked atresia of the infundibulum resulting in dilatation of that calyx and blunting of minor calyces. A partial nephrectomy was advised to remove a segment of kidney and the involved calyx. Operation refused.

CASE 4. J.B. Female, 50, married. Vague generalized abdominal pains, anorexia, asthenia. Marked intestinal gas, constipation. Urinalysis usually shows occasional pus clump. Plain X-rays negative. There was no evidence of obstruction when the ureteral catheters were passed and the function was fair from both sides. Bilateral pyelograms were made with patient in Trendelenburg and eight minutes later in erect position. Definite left nephroptosis was shown together with some dilatation of kidney pelvis, the right ureter did not drain the pelvis from its lowest point but was attached near the upper portion, and there was no appreciable emptying of the pelvis after eight minutes, producing what von Lichtenberg terms urinary or renal constipation. Had these exposures not been made both prone and erect and had not an exposure been made after the normal emptying time, a complete idea of pathology would not have been gained. As to the treatment in this particular case, there should be worn an abdominal support to overcome her apparent visceroptosis with possibly kidney pads to aid in holding the kidneys in position, occasional drainages of kidney pelvis and attention to gastrointestinal hygiene. Such kidneys because of poor drainage are easily infected. Certain plastic operations on the renal pelvis and ureter may be necessary. The main point to be brought out in this case is that only after a complete work-up and upon varying somewhat the routine procedure could a definite picture of her urinary tract pathology be gained.

CASE 5. G.E. Female, 36 years old, married. For past eight years has had occasional attacks of frequency and urgency of urination with burning. On two occasions during these attacks there was frank hematuria. Urinalyses during intervals have been negative. She tires easily and complains of more or less constant ache in the back, localizing it to the lower thoracic region in mid-line. The pain disappears on lying down. There has never been any acute colic or any radiation. In this case the right kidney could be vaguely felt well down in the flank. Intravenous urography was done and exposures in Trendelenburg and erect position show the degree of mobility of the right kidney, the tortuosity of right ureter, the good position of the left kidney, and no evidence of beginning hydronephrosis. Treatment consisted of abdominal belt with kidney support, occasional pelvic drainage and lavage, massage and exercises. Although she put

on ten pounds in weight and her general health improved, no improvement occurred in her backache or in the occasional bladder symptoms. After nearly a year of conservative treatment, nephropexy was advised. The operation being of such recent date, no



Case No. 7

report can be made concerning its benefit at the present time.

CASE 6. E.C.B. Male, married, 26 years of age. For past eight years has had pain across lower back, variously diagnosed as lumbago, sacroiliac strain, and arthritis. Has worn sacroiliac belt and has had various types of hypodermic medications. Recently he noticed some urgency of urination, with burning. Urinalyses have been consistently negative and plain X-rays show no pathology. That the diagnosis of urologic pathology can not be ruled out by these negative findings was proven when definite bilateral strictures of the ureters were found on attempting to pass the catheters. This was confirmed by the pyeloureterogram. Complete relief from symptoms occurred after a few dilatations. In cases of this type, where it is difficult to pass a catheter far enough into the ureter to allow the iodide to be injected, intravenous urography would be of value.

CASE 7. W.McE. The degree of kidney involvement possible without any definite history or physical findings is well illustrated by this case of carcinoma of the kidney in a male 37 years old. The only complaints were lower abdominal pains, cramplike in character and becoming progressively worse, pain in spine from cervical to sacral portions for past year, and marked loss of weight and strength. There had never been pain in the kidney region or along the course of the ureter, and no hematuria. During the past two weeks only there was some pain and burning on urination and the urine showed only scattered white blood cells. There was no mass palpable and no percussion tenderness over the kidney. Plain X-ray was negative. And yet in spite of all these negative findings, the uro-

logical work-up showed a totally destroyed right kidney both in the retrograde and the intravenous urograms on the basis of which a tentative diagnosis of malignancy was made. The patient died following nephrectomy. At autopsy a hard, nodular and fixed mass was found at the pylorus and many enlarged glands both mesenteric and retroperitoneal. All tissues proved microscopically to be adenocarcinoma of the same cell type, probably primary in the pylorus. He had had a posterior gastroenterostomy eighteen months previously for peptic ulcer. The case is interesting in other features but so far as the subject of this paper is concerned it well illustrates the necessity of a complete study in order to arrive at a diagnosis.

Other types of urinary tract pathology could easily be added to these few illustrative cases, but sufficient examples have been shown to again emphasize the fact that a complete work-up is necessary in many patients to make the diagnosis and that a negative preliminary examination including a plain X-ray is not definite evidence against certain types of pathology.

IN contrast to these definite findings are those cases giving a typical history of renal or ureteral pathology but in whom nothing abnormal can be found after a thorough work-up. Some of these will show a slight deviation from what is considered normal, but not enough to warrant a definite diagnosis. Such minor abnormalities are frequently seen in a good ureterogram, but definite knowledge of normal ureteral peristalsis has not yet arrived at a satisfactory stage. Recent work being done with rapid X-ray exposures giving an almost continuous picture of the peristaltic wave will undoubtedly add to our knowledge.

In this same category are found those cases in whom all symptoms subside following the examination, though no definite pathology may be found. This happens frequently enough to cause speculation as to the reason. The usual explanation is that the ureteral catheterization has in some way straightened out a kink, caused some dilatation or otherwise removed some minor local condition which may be too small to show as an abnormality in the ureterogram or to cause any appreciable sense of resistance while passing the catheter.

The conditions thus far considered are of the more or less chronic type. It is in an acutely ill patient that possibly more judgment is required. Many emergency appendectomies have had a calculus of the ureter as the real pathology and many so-called chronic appendices are in reality ureteral strictures. A ureteral calculus without a few red blood cells in the urine is rare but possible. The location of the pain, vomiting and tenderness, slight fever and leucocytosis from an associated pyelitis make the differentiation sometimes difficult. In these cases a plain X-ray is of great value as about 90% of urinary calculi are sufficiently opaque to throw a shadow. The danger of temporizing with an acutely inflamed appendix is sufficient reason for assuming that diagnosis unless the weight of evidence for calculus is very strong. However, in making a diagnosis of chronic appendicitis where there is no operative emergency, it would seem logical to consider and rule out urological pathology, and as has been repeatedly mentioned this can not be done accurately without a complete work-up.

IT is well to remind ourselves that infants and children are subject to practically the same urological lesions as adults, with anomalies of development an important feature. The same diagnostic means are used in the infant as have already been mentioned. Cysto-

scopes small enough for the youngest child are in common use and give perfectly satisfactory results.

No effort has been made to cover the field of upper urinary tract diagnosis or the possibilities in the differential diagnosis. An endeavor has been made to convey a general idea of what the complete urological diagnosis consists, the value it can be to a preliminary diagnosis and particularly its necessity in establishing the proper diagnosis in otherwise obscure cases.

40-04 Bowne Street.

Discussion

DR. JOSEPH S. THOMAS: "Dr. Derrah has sold his point of view to me. As it is reasonable to meet with lots of surprising things in other parts of the body, it would be strange indeed if we did not meet them in the kidney and ureter. So we ought to be more careful about operating on slender indications.

"A bothersome kind of case in my experience is the patient who is referred to the surgeon by a physician who has been watching the patient for some time with one of these right-sided pains with no history of any acute attack sufficient to disable the patient enough to cause him to go to bed and no history of fever or vomiting, simply right-sided pain. What are you going to do with such a patient? How can you make reasonably sure if you are going to operate that you are going to operate for the correct condition? That is one important bit of information that I would like to get from the urologist. I should judge, from what Dr. Derrah has said, that in such a patient the reasonable thing to do would be to make use of this modern intravenous urography. If that is true, this modern intravenous urography will be a great help to us. I used to believe there was no such thing as a chronic appendix; that you could make your classification either acute or recurrent appendicitis, but one does see a few patients, not very many, with simply right-sided pain where removal of the appendix relieves the pain, even though one does not find much wrong with the appendix. On the other hand, if one does an operation and removes the appendix in a patient like that and the pain continues you become very unpopular. If the urologist can give us any assistance in avoiding that embarrassing situation I think we should be very grateful to him."

DR. FRANCIS G. RILEY: "Dr. Derrah has covered the subject so completely that it leaves very, very little for one to discuss. I am entirely in agreement with all that he has said with reference to the importance in all obscure abdominal cases of ruling out the urinary tract. It is a well-known fact that approximately 30 per cent of the obscure abdominal conditions are urological; that is, 30 per cent of the obscure abdominal conditions, those that are not frankly one thing or the other. Also many of these urological cases, something like 16 per cent, I believe, are of stone diagnosed primarily as a gastrointestinal condition; a gastrointestinal condition is first diagnosed and later found out to be ureteral stone frequently.

"I have had some experience with iopax instead of sodium iodide in the last year or two in the preparation of pyelograms and ureterograms. I think it has one advantage over sodium iodide and that is in the reaction on the part of the patient following injection of the kidney and ureter. It has, I think, been a decided advantage to me. The picture the doctor showed, the X-ray of the kidney—the last picture or next to the last—the patient in that case gave a history that is typical of so many of these hypernephromas, an obscure symptom-complex—vague pains and that sort of thing, until the condition has advanced to such a degree that any operative procedure is practically useless.

"In conjunction with the doctor's paper I would like to present a couple of cases just to show some of these conditions with histories."

Note:—The doctor now showed several X-rays of patients who had been under his care and discussed the salient points in each case, but as the lights were out it was impossible to report this part of the discussion.

DR. LEO G. GOLDBERG: "Dr. Derrah is to be commended on his presentation. He has covered the field very well.

"One important point that I think should be brought out by a urological examination in a case with a definite diagnosis, such as for example a kidney sac full of stone, is the presence of a second kidney. Once in a while, such a case passes out presumably because of an anuria, and autopsy reveals the absence of a kidney on the other side, or only a very small organ. Although such accidents are rare, yet they occur and

they are still referred to in the literature. This brings out the necessity of ascertaining the function of the other kidney before any operative procedure is done.

"A point in the use of neo-iopax, which is being used by everyone now to rule out kidney pathology, is that sometimes the pictures are not perfect, yet, so to speak, they are good, and they are called negative. Still there may be small areas of pathology such as early tumor formation, early changes in the calyces, or beginning tuberculosis, none of which may give much in the way of symptoms. In such cases, one may miss the diagnosis, especially in tumor cases. Later on, when the diagnosis is made, it is too late.

"I would like to say another word in regard to neo-iopax. I think every general man should be interested in this procedure. It first came out four years ago. Like every other procedure it has its indications and contraindications. I think one of its best indications is in the ruling out of pathology of the genitourinary tract. It can be used in the case of many men and women who would not care to be cystoscoped under any circumstances, and the pictures which are now being taken by its use are much better than they were at first. If you have normal pictures, you can definitely say that the genitourinary tract is normal and so can be ruled out. On the other hand, if you have marked pathology, which may prevent the excretion of the dye, you still have to cystoscope the patient; and if the pictures are not good, you are still puzzled as to whether or not the genitourinary tract is involved. It is just another laboratory test to be added to the diagnostic features, but not to rule out or take the place of any other procedures.

"Another good place where it can be used is in children to rule out pathology before cystoscopy. It takes over an hour to do. As far as time-saving is concerned, no time is saved.

"Every picture should be immediately developed and looked at to determine how many pictures will be needed. It isn't like taking a flat plate.

"The greatest field for its use now is in children where you may save a general anesthetic and a real operative procedure."

DR. ELIAS RUBIN: "The doctor really has given us the diagnostic methods that cover the entire field of urology and the pictures shown were those of clear-cut cases and showed the advantages of a complete urological work-up, not that I disagree with him as to the necessity of a complete urological work-up but very often after the problem is presented and the urologist does his work-up he is as much in the dark as before, and I should like to present this phase so as to explain that sometimes beforehand we can make mistakes even with all the modern diagnostic procedures at our disposal. I should like particularly to talk about those cases in which shadows which are sometimes absent on one plate appear at a later time. Only recently a case presented with a rather typical picture of ureteral colic, red blood cells in the urine, and no macroscopic blood. A plain X-ray revealed no shadow. Cystoscopy was done, the pyelogram did not appear terribly unusual, and even the wax tip was negative. The patient was told that he perhaps had a stone which had been passed and was told to go home. In a week he had another attack. A picture taken at this time showed definitely a small stone in the ureter, in the intramural portion of the ureter. It is possible this was a second stone, but considering the fact that only a week had elapsed it does not seem likely another stone had formed in this time, but that instead it was a stone that had not been recognized, despite the fact that all the diagnostic procedures were employed. In addition, there is a large group of cases with a definite clinical picture of ureteral calculus in which all diagnostic procedures are negative; that is, the clinical picture of ureteral calculus with red blood cells in the urine where X-ray examination reveals no positive findings, and, likewise, there are no positive findings in the cystoscopic procedures. Whether we are to classify all these cases as small ureteral calculi which have passed by themselves between the time of the attack and the time of examination, or whether we should call them idiopathic calculus, as it were, cannot, of course, be definitely established, but there are such cases.

"In addition, there are cases which present definite findings and in which the diagnosis is not established at once. Very often there are cases of tuberculosis which do not present all the classical symptoms and yet in which eventually the diagnosis is made. I am thinking of one case which I had the occasion to see rather recently in a young man of 25 in whom pyuria suddenly appeared about two months before coming for examination. This was verified because the patient had had a laboratory examination and the urine was perfectly clear, and still at this time pyuria was present without question and was present on repeated examinations. The flat plate was negative. Cystoscopy revealed an obstruction on one side. A pyelogram

was made and showed a questionable filling defect. There was hardly any hydronephrosis. Wax tip was negative. Being suspicious of the amount of pyonephrosis, a specimen was examined for tubercle bacilli at that time and the report was negative. The case dragged along for about four or five weeks without any improvement in the symptoms. Repeated examinations of the urine were carried out until finally tubercle bacilli were identified in the urine and on re-cystoscopy a small tubercle was found at the mouth of one of the ureteral orifices which later proved to be the side on which the renal tuberculosis existed.

"One point about intravenous pyelography and obstruction: Dr. Derrah made a point that I cannot quite agree with. He said in cases of obstruction (his case was one of stone) one generally gets a good picture. I do not think that is always so. If the obstruction is incomplete, but yet sufficient to produce a hydrö-ureter and the hydronephrosis is sufficient to cause a complete shut-down, then you will get a picture because of the larger column of urine, but if the obstruction is complete and sudden, then there will be no picture on that side. There was one case that I saw recently in which such a condition occurred. I knew that the patient had a ureteral calculus; there was no question about it (I was interested simply in the picture); the patient was given neo-iopax or skiodan intravenously and the opposite side filled out very distinctly, then right on the table a catheter was passed above the obstructing calculus and the urine allowed to drain off, and I was interested to see if the relief of pressure would allow the intravenous pyelogram material to show a picture, but it did not and did not for an hour afterwards. I believe in cases of complete obstruction the ureter and pelvis will not show up."

DR. ALEXANDER S. WALKER: "The paper presented by Dr. Derrah was most complete and I wish to extend my congratulations to him on covering the field so thoroughly.

"There is one point that I would like to speak of, namely, the value of bilateral pyelograms. I remember distinctly three cases that I had in my own work in which the pathology was on the side on which the pyelogram was done, but on the opposite side the urine was clear and apparently normal. In one case a stone in the kidney, and in the other a tuberculous kidney, in both cases there was a stricture of the opposite ureter. The other case was one of stone in the pelvis of the kidney, at the juncture of the pelvis with the ureter, with a definite water-trap ureter on the other side.

"While we may not always do a pyelogram on both sides I think we lose a considerable pathology and believe it should always be done when there is sufficient indication for an operation.

DR. WILLIAM J. LAVELLE: "I think that the urologists take us to task every once in a while for the reason that they find kinks in the ureters a little too frequently perhaps. I think if some of them were to follow the cases that we get of appendicitis in which they get kinks of the ureters afterwards, they would find them to probably be pus appendices that kink on top of the ureter and one naturally gets scar tissue afterwards."

DR. W. HOWARD BARBER: "I would like to ask the doctor what percentage of negative X-ray plates he receives in kidney-ureter stone cases. I have been under the impression that the great majority of urinary calculi contain calcium and are opaque to the X-rays.

"What results does he obtain after nephropexy? I concluded several years ago from experience with kidney suspension operations of my own and from observations after those performed by others that kidneys restored to their normal positions too often ptose again, even quite appreciably within the first postoperative year.

"I would like to know what significance he attaches to a few red blood cells habitually appearing in the urine in an adult male with no other local or urological symptoms. Would he be inclined to cystoscope and if negative for the bladder and urethral tract continue on to a complete urological examination?"

DR. WILLIAM J. LAVELLE: "I would like to hear a little discussion on the value of intravenous versus the ordinary method of doing a pyelogram."

DR. WILLIAM H. BARBER: "Do you mean in youngsters?"

DR. LAVELLE: "Not in youngsters alone. How much benefit would it be to do the new intravenous method over the old-fashioned method of taking a pyelogram? Some of the urologists I have talked to only use the intravenous method in selected cases and if there is a doubt in their minds they wind up by doing the other method to check up on themselves."

DR. FRANCIS G. RILEY: "Intravenous urography has its limitations. It is indicated especially only in cases where for some reason, as in cases of physical deformity or ureter transplantation—something of that sort—a retrograde urography cannot be done. If in routine cases this intravenous urography does show some possible pathology it does not show it distinctly very often, except in clear cut cases not sufficiently strong to make the diagnosis absolute, and, therefore, it has to be checked up by a retrograde. It may answer the purpose in many of the other cases where for some reason a retrograde cannot be done or may not be desirable."

DR. JOSEPH S. THOMAS: "What we as surgeons are after is some way of excluding any serious pathology. Can your intravenous urography reasonably exclude the possibility of stone or stricture?"

DR. BENJAMIN DERRAH: "I appreciate the discussion given my paper."

"Dr. Riley's case of calculus was unusual and interesting. His remarks concerning the frequency of urological pathology as the cause of indefinite gastrointestinal symptoms were well illustrated by the slides he has shown."

"Dr. Thomas' question is difficult to answer. I don't think we can be too dogmatic and say that in every case where chronic appendicitis is suspected there should be a complete work-up. The point to be emphasized is to keep in mind the possibility of urologic pathology and go over the history again with that thought in mind. If that is done and it is realized that a negative urinalysis and flat X-ray do not necessarily rule out pathology the object of my paper is realized."

A Consideration of Edema (Concluded from page 130)

By these measures there is usually obtained a very active diuresis. The strong mercurials act partly on the kidney and partly by somehow increasing the blood volume (Crawford and McIntosh¹¹). They are toxic to some patients, the commonest bad result being a bloody diarrhea. They are also quite irritating to the kidneys, and in actual nephritis dangerous, though the kidney of stasis stands them very well. Finally, it is true that edema of cardiac origin which cannot be controlled by rest, digitalis and restricted fluid usually denotes a very serious condition. Goldring¹² found the average length of life under such circumstances to be six months. On the other hand I have seen some such patients kept reasonably comfortable for much longer than that, one for three years, with repeated doses of salyrgan and an occasional abdominal paracentesis.

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Symptoms, Diagnosis and Treatment of Cancer of the Colon (Concluded from page 131)

perineal operation, without a colostomy. When cancer attacks the descending colon we prefer a colostomy first, followed by a resection of the tumor and an end-to-end anastomosis. Cancer of the splenic flexure, transverse colon, hepatic colon, cecum and ascending colon can best be treated, with practically no mortality, by means of a Mikulicz operation. It may be necessary to do a preliminary colostomy in some of the cases before proceeding with the Mikulicz.

For some time the mortality following operations on the colon for cancer was frightful; however, discriminative refinements in technic introduced by the general surgeon, depending on the location of the

lesion, have reduced the mortality very noticeably. Morbidity has also been changed, thanks to the one-stage operation without a colostomy. The latter has prevented many patients in the past from obtaining the benefits of a timely operation. The new anus is now placed in the perineum. From our recent experiences many of these patients have control of feces and gas.
1738 Pine Street.

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Observations on Effect of Insulin in Thin Persons

HARRY BLOTNER, Boston (*Journal A. M. A.*, Jan. 14, 1933), presents a clinical study of the effect of the subcutaneous administration of insulin in nineteen healthy thin persons. Ten units of insulin, three times a day, was the standard dosage of insulin used, a few patients taking somewhat more or less than this amount, and a liberal diet was employed uniformly. After insulin injections were started, the patients gained weight rapidly and immediately. The increase in weight tended to become less marked as the weight approached the standard normal weight. In thirteen cases after the omission of insulin the weight remained either constant or continued to increase during periods of subsequent observation, which varied from six weeks to fourteen months. Two patients lost 8 and 5 pounds (3.6 and 2.3 Kg.) of the gained weight within six months of the omission of insulin. Insulin appeared to act as an admirable tonic, all the individuals receiving it feeling much stronger and more active than they had felt previously. Mild hypoglycemic reactions occurred rarely. Local skin hypersensitiveness to insulin appeared in six cases. This finding is striking as compared with the rarity with which skin hypersensitiveness to insulin is seen in diabetic patients receiving the drug. There were no other untoward symptoms. The author believes that the gain in weight in thin persons taking insulin is probably due to an increased intake, better digestion and increased assimilation of food. The increase in weight does not appear to be due to water retention, as may occur in certain diabetic patients taking insulin. The relation between the fluid intake and output during and after the use of insulin was not abnormal, nor did diuresis develop after the omission of insulin. That insulin increases the appetite and produces an increased ingestion of food is suggested by a study of the nitrogen excretion in the urine. In the cases studied, the nitrogen excretion rose considerably during the period of insulin therapy and then decreased after its omission to near the previous level. That insulin may increase the absorption and assimilation of food is suggested by a study of phenolsulphonphthalein excretion during the treatment. There was a uniform decrease of from 8 to 27 per cent in the excretion in the urine of intramuscularly injected phenolsulphonphthalein during the period of insulin treatment and a return to the original level after the omission of insulin. This was possibly due to an increased excretion of phenolsulphonphthalein in the bile as a result of the stimulation of the flow of bile by insulin, and since the flow of pancreatic juice is similarly stimulated by insulin it is reasonable to assume that increased absorption of food may occur from its employment. That insulin serves as an admirable tonic physiologically as well as psychologically is suggested by a study of the plasma protein concentration, the red blood count and the circulating blood volume of persons receiving insulin. The plasma protein concentration tended to increase during and after the period of insulin administration. The red blood count showed an average uniform increase of approximately 400,000 red cells, which usually persisted after the omission of insulin. The blood volume also increased perceptibly during or shortly after the use of insulin. The basal metabolic rate was unaffected or possibly tended to show a slight decrease during or after insulin therapy. These data record evidence to explain some of the beneficial clinical results that may be obtained with insulin in certain conditions other than diabetes. Because of its varying action on different tissues, insulin may be of considerable value in the management of properly selected cases in which it is desirable to bring about gain in weight. The use of insulin for this purpose appears to be rational and is a simple and safe form of therapy.

The million spent by the committee, studying the cost of medical care, could have fed many a starving person. It would have bought liver for pernicious anemia patients and given food to many expectant mothers.

Cancer

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The Treatment of Cancer of the Uterus

The treatment of cancer of the uterus may be discussed from the viewpoint of palliation and from that of cure. At present a patient is considered cured by the majority of observers if she lives five years without recurrence. It is only fair to say, however, that some writers think a ten-year period should be allowed to pass before the danger of metastasis can be said to be passed (Bonney¹). However, Bonney says that 90% of the recurrences occur before the end of the fifth year.

Another approach to the discussion of treatment may be made from the viewpoint of extension of the disease, basing the discussion on questions of operability or inoperability or on the division into four groups as proposed by Schreiner.²

In Group I he placed all lesions which are entirely confined to the cervix, with no extensions into the fornices or the vaginal mucous membrane.

In Group II he placed all lesions in which a portion or all of the cervix is involved and in which the growth extends to the mucous membrane and walls of the vagina.

In Group III he placed all cases in which, in addition to involvement of the mucous membrane of the vagina, there is beginning infiltration of one or both broad ligaments, with moderate fixation.

In Group IV he placed cases that are far advanced and in which there is complete fixation of the uterus.

Yet another method of approach is to be found according to the means employed: Surgery, including cautery surgery, and irradiation with Röntgen rays or with radium. Both of these agencies may be employed before surgery, postoperatively, or alone, and they may be combined.

Surgery: If surgery alone is employed in the treatment of cancer of the uterus, either of the cervix or of the body, total hysterectomy, either by the vaginal or the abdominal route, is the only logical method. Partial hysterectomy is dangerous on account of the likelihood of recurrence in the stump.

For cancer of the cervix surgery is preferred by Kermauner,³ Bonney¹, Auer,⁴ Philipp⁵, and Percy.⁶ None of these authors, however, denies the advantages of irradiation. Kermauner³ says that he would not consider giving up surgery, but that he is sending more patients for both preoperative and postoperative irradiation. Auer⁴ found that the patients after operation showed greater permanence after the five-year period than did the irradiated patients, and he says: "I believe that our results indicate that radical surgery still offers the greater hope of cure in early carcinoma of the cervix." Philipp⁵ considers surgery superior to irradiation in operable cases. "A woman in good general health should be operated on because of the psychic effect produced by the actual removal of the tumor."

Ward⁸ says: "If surgery is employed for carcinoma of the cervix only the radical Wertheim operation is justifiable." Percy⁶ advocates cautery surgery and a discussion of cautery surgery will be found in the report of Greenough⁹.

In cancer of the body of the uterus Petersen⁷ says that surgery, preferably vaginal hysterectomy, remains the principal method of treatment. Heyman¹⁰ believes that in operable cases of cancer of the body of the uterus hysterectomy should be done. Weibel¹¹ and Lacassagne¹³ prefer surgery, and Stacy¹² has had more five-year *arrested* cases following operation for carcinoma of the fundus than for carcinoma in other commonly affected areas.

Irradiation: Irradiation with Röntgen rays is preferred by Lacassagne.¹³ Röntgen ray irradiation is by all other authors employed as an adjunct to surgery or to radium irradiation. Dyroff,¹⁰ discussing the impatience of the surgeon on account of lack of prompt response after Röntgen irradiation, points out that the degeneration of the cancer cells and the proliferation of the cells of the connective tissue, necessary for repair, require somewhat more than nine months. Döderlein²⁰ points out that the effects of irradiation may last for six months.

Irradiation with radium is the method of preference in the hands of the majority of writers. Petersen's⁷ method is operation in patients under fifty years of age if no contraindication exists and radium in all cases with the slightest contraindication to surgery and in all patients beyond fifty years of age. He does not approve of preliminary curettage or cauterization. Bartlett and Smith,¹⁵ however, approve of these methods when necessary to remove excess of malignant tissue.

Strachan¹⁶ points out the advantages of irradiation with radium in lessening hemorrhage, septic discharges and pain and says: "Even if life were not prolonged by a single day, irradiation would be justified in its use" for these reasons. This opinion is concurred in by Neill,¹⁷ Goinard and Guedj,¹⁸ Greenough⁹ and Heyman.¹⁹ Neill¹⁷ adds that radium irradiation does away with primary mortality and that it can be safely used in patients who are bad surgical risks.

Rubens-Duval²⁰ is of the opinion that radium irradiation favors subsequent hysterectomy. He thinks that radium irradiation of the recurrences following surgery is difficult. The statistical report of the Cancer Commission of the Health Organization of the League of Nations²¹ concerning the treatment of uterine cancer with radium is of great interest. Particularly should the percentage of inoperable cases observed at the Radiumhemmet of Stockholm (79.63) be remembered when estimating the value of radium irradiation.

Norsworthy,²² Asherson,²³ Hartmann, Fabre and Dubois-Roquebert,²⁴ Heyman,¹⁰ Neill,¹⁷ Donaldson²⁵,

Taylor,²⁶ Ward,⁸ Kaplan²⁷, Jones,³³ Laborde and Wickham²⁸ favor radium. Ward⁸ says that in advanced cases radium therapy has no rival. Döderlein²⁹ says that in the use of irradiation with radium 100 mg. applied for 20 hours is more effective than 20 mg. applied for 100 hours, although both methods supply 200 mg. hours of exposure. The larger dose must be applied with a suitable filter and at a suitable distance from the diseased area. Heyman¹⁹ also thinks that large quantities of radium are necessary and Greenough⁹ and Bartlett and Smith¹⁵ call attention to the fact that there are no immediate postoperative deaths after radium irradiation. The method employed by Bowing and Fricke¹⁴ in inoperable cases consists of six to eight applications given alternately interstitially, intracervically, and vaginally, the total amount reaching 5,000 to 6,000 mg. hours over a period averaging three weeks.

Lund³⁰ pointed out that the percentage of cures after treatment with radium was twice as great in patients of normal weight as in those much under or over normal weight. This relation was not so marked in carcinoma of the fundus.

Adler³¹ prefers postoperative irradiation with radium after vaginal hysterectomy.

Greenough⁹ in analyzing 1210 cases recorded in a uniform manner for the American College of Surgeons found that there were 9% of five-year cures among 681 primary cases and 8% among 141 recurrent cases. He says: "The successful cases were all treated with radium or hysterectomy or both. No cures were obtained by other methods. The value of radium as a palliative measure in advanced cases is beyond dispute. The treatment of cancer of the cervix with inadequate amounts of radium should not be encouraged."

Brooksher³² gives the following contraindications to the use of radium irradiation: (1) General emaciation and cachexia; (2) a red cell count below 3,000,000 and a hemoglobin percentage of less than 40; (3) hydro-nephrosis or pyonephrosis; (4) rectovaginal and vesicovaginal fistulae; (5) pelvic inflammatory disease; (6) cases in which the whole pelvis is involved in the extensions of the growth; (7) impaired metabolism.

Philipp⁵ says: "Irradiation with radium is very nearly as satisfactory as surgery in women in whom the general condition of health contraindicates the greater ordeal and dangers of surgical intervention." He is in favor of radium alone rather than a combination of radium and Röntgen rays.

Greenough's⁹ arguments for the use of radium in preference to hysterectomy in cases of cancer of the cervix are the absence of operative mortality after irradiation and the fact that in those cases in which cure is not obtained, the best known palliative method of treatment will have been employed. Diminution of discharge and hemorrhage, even to the extent of local healing, occurs in many of these cases even though the patient is not cured.

Auer³⁴ describes a method of treatment by the implantation of radon in the growth during celiotomy and subsequent irradiation with radium applied *per vaginam*.

Kaplan²⁷ says that irradiation has replaced all operative procedures for cancer of the cervix at Bellevue Hospital since 1924 and that it has been the standard therapy for cancer of the cervix in the cancer units under the jurisdiction of the Department of Hospitals of the City of New York.

Keene³⁷ says: "We have not operated on patients with carcinoma of the cervix in the John G. Clark Clinic for the past fifteen years."

Nebesky³⁵ is an advocate of combined irradiation with radium and Röntgen rays.

Healy and Cutler³⁶ point out the fact that in their hands the prognosis in cases of carcinoma of the fundus treated with partial hysterectomy may be rendered favorable by prompt irradiation of the stump. Cases of inoperable carcinoma of the fundus and cases in which operation offers technical difficulties are best treated by irradiation alone.

Summary

After reviewing the recent literature of cancer of the uterus as represented in this installment of the Department of Cancer and in that published in March (*Medical Times and Long Island Medical Journal*, March, 1933, 61:80), we think it legitimate to formulate the following conclusions:

1. Any woman who presents hemorrhage from the genital tract or leukorrhea should have an immediate pelvic examination with a view to proving that the symptoms are not the result of cancer.

2. Biopsy and diagnostic curettage should be advised and urged.

3. If the lesion proves to be chronic cystic cervicitis, chronic hyperplastic endometritis, cervical tears or cervical ectropion, it should be treated and cured.

4. If the lesion proves to be carcinoma of the cervix, the majority opinion indicates that it should be treated with radium by a physician trained in the use of radium and with a large enough supply of radium at his disposal.

5. An estimate should be made of the extent of the disease and, in consultation with the radiologist and a gynecologist, decision should be made concerning subsequent irradiation, either with radium or Röntgen rays, and the advisability of surgery.

6. If the lesion proves to be carcinoma of the fundus, we believe complete hysterectomy followed by Röntgen irradiation is the best method. The Röntgen irradiation should be given by a physician trained as a radiologist and recognized by the American Medical Association as such³⁸, and with an equipment of at least 200 kilovolts capacity.

7. The patient should be encouraged to report for frequent examinations in order to be sure recurrences are not developing. The physician should be urged to insist on this follow-up routine.

8. Cancer of the uterus is curable if it is diagnosed early. It is preventable if the precancerous lesions are treated and cured.

9. Both prevention and cure require cooperation between the patient and the physician in whom the patient has confidence.

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Economics

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"Free" Clinics

IN 1931 there were made to the free dispensaries of New York City by the sick for consultation and treatment, approximately 6,000,000 visits. If the average number of visits made by a person for an ailment is three, it may be concluded that nearly one-third of the population of the richest city in the world sought treatment in these free clinics. The meaning of the term "free clinic" has undergone much change during the past few years. These clinics were originally intended for the indigent, for those indigent that could not obtain treatment elsewhere. For the treatment a nominal registration fee of perhaps ten cents was charged, or there was no charge whatever. To maintain that purpose and to prevent abuses, rules and laws were made, but in the laws many exceptions appeared. Dispensaries could charge more than a nominal fee so long as they did not make a profit. Dispensaries connected with teaching institutions were, generally speaking, exempted from the laws. The clinics for venereal diseases and tuberculosis received special consideration. As the dispensaries grew, the information of facilities and of the skill of the "professors" in attendance was widely spread and required investigations into the social condition of applicants soon dwindled, because of assumed prohibitive costs, to a few perfunctory questions.

With the needs for laboratory work and instruments of precision the dispensary authorities felt that an increase in price was just. Today that price to the indigent patient has reached high figures. Many of these clinics charge for each visit fifty cents, some twenty-five cents, others one dollar. A small number at every clinic are treated without charge. There are very few patients admitted but need some laboratory service and for every such separate service a fee is charged. Blood counts and cultures, sputums and spinal fluids, analyses of urine and gastric contents, Wassermanns and X-ray work have fees varying with the work done and the different institutions. In one institution in Brooklyn an indigent patient with symptoms referred to his gastrointestinal system may have to pay twenty dollars in addition to his several admissions before a diagnosis is established, or treatment begun. In another it costs twelve dollars and fifty cents. In most of the others it is a question of "how much the traffic will bear." Therapeutic procedures and drugs, too, have a varying price. Insulin and salvarsan preparations frequently carry the pre-war price, and although the reduction of salvarsan has dropped from \$4.00 to twenty-five cents per dose, the patient may be asked \$3.00 or \$4.00 for the drug alone.

It is not surprising to find that the more popular dispensaries receive the very large sums of money stated in their reports. One clinic in Brooklyn collected in 1931 \$125,000 from these indigent patients, another nearly as much, while the others earn in reducing amounts, varying with the rates and the number of their patients.

The dispensaries attached to our municipal hospitals make no charge for any service rendered. During the past few years their attendance has increased very rapidly—much more rapidly than at the dispensaries of the voluntary hospitals, and at each of the municipal dispensaries the explanation given of the disproportionate increase is the inability of the patients to pay the fees elsewhere exacted. It has been found further that the care and treatment at the voluntary clinic had been hurried and the wasted waiting time unnecessarily prolonged by the overcrowding of fee-paying patients.

There were introduced into the Legislature of New York State, during the last term, two bills to remedy these conditions, to restore the dispensaries to their original purposes and to give better and more thorough care to the sick poor. One bill proposed to prohibit hospitals receiving financial support from the government from charging dispensary patients any fees. The other bill aimed to relieve the hospital from the expense of investigating the social status of applicants by placing that duty on the municipal authorities. There was nothing in either bill that would have restricted in any way service to the sick poor. There was no suggestion in either bill that the medical profession would diminish in any way its service to those sick unable to command treatment. Those 6,000,000 visits made to the dispensaries by patients in 1931, for which not one dollar was received by any doctor, give eloquent testimony of the doctors' work. However, the two bills in question were defeated.

There can be no question of the charitable help that dispensaries through their doctors have given in the past and, to a considerable extent, are still rendering. In the expansion of the service, however, probably in harmony with the recent times, abuses have entered. Costly buildings have been erected. Personnel has inordinately increased. Expensive equipment has been multiplied and for justification of the big business methods larger numbers of patients have been sought. Advertising by so-called legitimate methods is used, and the glamour of the million-dollar buildings makes its own impression on the sick. Even motor busses have been used to facilitate the arrivals and departures to transit connections, so that from all corners of the city and even outside of the city are patients welcomed. Patients paying the required fees are intentionally and fully convinced that they are not objects of charity. Many, indeed, are led to believe that the doctors who do the actual work are recompensed for their services, although it was but a short space of time after one of these gigantic centers of hospitals and dispensaries was opened before scores of physicians were obliged to move from that section of the city. In sections of New Jersey easily accessible to a New York center a similar situation has arisen.

With it all, according to the verified statements, the expenses of maintaining the dispensary have increased.

Despite the large numbers attending and the exemption from taxation of the buildings erected by charity, the cost of each visit approaches two dollars and in many instances exceeds that sum. This sum is reached, of course, by the hospital's allocation of general costs to the dispensary. It is noteworthy that the strongest opposition to the bills in Albany was in direct proportion to the amount of monies received from the dispensary patients, and although the cost of each visit is so much and the loss so great the opponents of these bills strenuously desired to continue.

The bills proposed at Albany would have separated free clinics from pay clinics, would have been the means of securing better treatment to those in need and would have prompted the giving of even greater charity to the places deserving.

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Make Motherhood Safe for Mothers

"Make Motherhood Safe for Mothers" is to be the cry of the mothers of America on Mother's Day, May 14th. Plans have been made by women's clubs and civic organizations from coast to coast to devote the week just preceding Mother's Day to crystallizing public opinion on the vital need of improving maternity care. "At least half of the 16,000 annual deaths in maternity are preventable, and ought to be prevented," is the claim of the Maternity Center Association of New York City, which is sponsoring the movement.

Mrs. Franklin D. Roosevelt will be the principal speaker at a meeting to be held in New York, May 12th. Others to attend are: Surgeon-General Hugh S. Cumming, Grace Abbott, Chief of the Children's Bureau, Thomas Parran, Jr., Health Commissioner of New York State, and such well-known women as Miss Mabel Choate, Mrs. E. Marshall Field, Miss Frances Perkins, Mrs. Kermit Roosevelt and Mrs. John Sloane. Outstanding physicians are to be present and explain how the high maternal death rate may be reduced.

Similar meetings are to be held throughout the country. Women's clubs everywhere have been urged to observe Mother's Day in this manner by Grace Morrison Poole, President of the General Federation of Women's Clubs and Julia K. Jaffray, Chairman of the Department of Public Welfare of the Federation, who have joined in a public statement calling for the cooperation of the women's clubs of the country. "Too long has sentiment alone been the characteristic of Mother's Day," states the announcement. "Until the public knows what adequate maternity care is and how to get it, there is little hope of reducing America's maternity death rate to a point where it will stand comparison with that of other leading nations. There is a biting irony in the fact that in several countries where Mother's Day is unknown, motherhood is twice as safe as in America."

According to Mrs. John Sloane, President of the Maternity Center Association, the most important factor in improving maternity care is the selection of the physician. "The physician," said Mrs. Sloane, "should be one whose experience warrants the extent of confidence which in the circumstances must be placed in him. Try to learn some-

thing about the number of births he has attended, and the degree of success that has marked his efforts. The Medical Board of the Maternity Center Association, comprised of leading obstetricians, is responsible for the statement that childbirth is not an illness, but a physiological process requiring the services of a competent and experienced physician if it is to be fully safeguarded.

"It is easy to understand," added Mrs. Sloane, "how husbands and wives seek a physician whom they hope can provide a simple, easy, painless childbirth, but they should know that leading authorities are unanimous in the opinion that efforts to relieve normal pain tend to increase the need for operative interference, and multiply the danger of infection and other complications.

"It is only when an aroused public opinion demands better care for mothers, that an improvement can be effected. We have been careless of mothers because we do not realize that about half of those who died could be saved; nor did we, the people, generally, know how to save them."

Dr. George W. Kosmak, Chairman of the Medical Board of the Association and Editor of the American Journal of Obstetrics and Gynecology, stated that the Campaign is also emphasizing the need for selecting a good hospital, unless the mother plans to have her baby at home.

"When women started going to hospitals to have their babies," said Dr. Kosmak, "it was hailed as a solution to the high maternal death rates. This did not prove to be the case. A hospital confinement is not necessarily a safe confinement, for hospitals as well as their attendants, vary in quality and competence. How is the layman, who can judge a hospital only by looking at the brick and mortar which make its structure, going to be able to judge the quality of care it gives, which has no relation to architecture? An aid in selecting a hospital is to choose one which has been approved by the American College of Surgeons. This means that the hospital is thoroughly examined each year by a group of competent experts. It means that strict supervision is exercised over the medical and nursing work performed within its walls, and that all risks are kept at a minimum. A hospital which has received this approval is always glad to state so to anyone calling over the telephone. There is, therefore, no need for a prospective mother to take a chance on going to an inferior institution. A woman is safer with good care at home than she is in an inferior hospital."

"Hospitalization of maternity cases is increasing everywhere, but the puerperal mortality is not decreasing anywhere," is the statement made recently by Dr. Joseph B. DeLee of the University of Chicago and Dr. Heinz Siedentopf of the University of Leipzig in a joint article in the Journal of the American Medical Association. These two investigators cite numerous authorities who call attention to the high institutional mortality compared with that of deliveries in the home.

Carbon Monoxide from Paint

Attention was drawn not long ago to the danger of carbon monoxide poisoning from the air of sealed compartments on board ship, and it was shown that the gas was derived from the linseed oil of the paint used in these compartments. Further investigations on this subject have been carried out by S. F. Dudley, F. G. Edmed, and R. C. Frederick. The materials used in the investigation were oxide of iron paint, red lead paint, aluminum paint, bituminous compositions, and two grease paints, one of which contained a small amount of linseed oil. These materials were spread inside petrol tins which were then sealed for varying periods. After one, two, or three months' storage the air from the cans was analysed, and its lethal effects estimated by biological experiments on mice. Linseed oil was again found to be the determining factor in the production of carbon monoxide; the paint dries, oxygen is absorbed, and carbon monoxide is evolved. On board ship it seems that after painting and sealing, absorption of oxygen proceeds to such an extent as to produce an irrespirable atmosphere by the time the compartment is reopened. But at an earlier stage of the process sufficient oxygen for respiration may co-exist with a dangerous quantity of carbon monoxide. A man entering such an atmosphere might breathe long enough to absorb a lethal dose of carbon monoxide; this, therefore, is a dangerous period. The quantity of paint, or perhaps rather the surface area exposed, as well as the time during which the compartment has remained sealed, will determine whether the atmosphere will poison those entering with carbon monoxide, or "drown" them from lack of oxygen.—*The Lancet.*

Contemporary Progress

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Rhinolaryngology

The Nasal Mucous Membrane As An Indicator of Body Chemistry

D. C. Jarvis (*Laryngoscope*, 43:42, January, 1933) states that from his clinical observations of fourteen years, he has found that the color of the nasal septum and the nature of the nasal discharge indicate whether the patient has a tendency to acidosis or alkalosis. The red septum, which the author discusses especially in this article, is an indication that the individual takes an excess of acid-ash producing foods in the diet and has a tendency to acidosis. There may or may not be an associated nasal discharge; if present it is usually due "to a crossing of the line of tolerance for acid-ash producing starches." It has a characteristic yellow tinge. If the septum is a crimson red, the patients usually show a definite syndrome of fatigue, most marked in the morning, irritability, dryness of the skin and lack of resistance to infection. In the treatment of these cases, patients are directed to use a preponderance of alkali-ash producing foods, to take lemonade without sugar three times a day for three days, and bicarbonate of soda three times a day for one day, in rotation for a month, then the lemonade indefinitely; cod-liver oil is given two to three times a day until the redness of the septum subsides and morning fatigue disappears, then in diminishing doses.

I. Frank (*Laryngoscope*, 43:48, January, 1933) has been able to confirm the findings of Jarvis in regard to the significance of the appearance of the nasal septum. He has found the pale septum more frequent than the red septum in his clinical experience. This he considers to be due to the fact that individuals with this type of septum have an annoying nasal discharge more frequently than those with the red septum. The pale septum is associated with allergic manifestations, not only nasal allergic symptoms, but urticaria, edema, arthritis, spastic colon and spastic ureter. These cases are best treated by changing the diet so as to include a preponderance of acid-ash producing foods, and by the administration of nitrohydrochloric acid as recommended by Jarvis. A solution of 5 drams dilute nitrohydrochloric acid in water sufficient to make 4 oz. is prepared and a teaspoonful in a glass of water given after each meal and at bedtime.

Histology and Chronic Inflammation of The Nasal Mucous Membrane

LeR. A. Schall (*Annals of Otolaryngology, Rhinology and Laryngology*, 42:15, March, 1933) notes that all mucous membranes are composed of a surface epithelium, a basement membrane and tunica propria or stroma, and the mucous membranes of the nose and nasal sinuses show these same elements, varying somewhat in character according to the site. The surface epithelium varies in type, and in the olfactory portion of the nose contains the olfactory cells. In the author's study of chronic inflammatory processes in the nose and nasal sinuses, he finds that these are of five types—edematous, infiltrative, fibrotic, cystic and degenerative. In the edematous type, the edema is most marked in the superficial part of the stroma; the vessel walls are thickened and the glands dilated, but cellular elements are not prominent. In the infiltrative type, the lymphocyte is the predominant cell; infiltration is marked both around the blood vessels and the glands of the stroma of the mucous membrane. In the fibrotic type, there is marked increase of fibrous tissue, constricting the glands, and marked decrease in cellular elements. In the cystic type, there are numerous minute cysts. The degenerative type is rarely seen and chiefly in the antrum. Nasal polyps are now generally recognized as inflammatory in origin; they show all the elements of the mucous membrane from which they arise, and the same changes as this membrane; they may be of the edematous, fibrous, or cystic type, or any combination of these types.

Treatment of Ozena

Halphen and Djiropoulos (*Presse Medicale*, 41:190, Feb. 4, 1933) report the treatment of ozena by a combination of bacteriophage with a vasodilator or radiotherapy. This treatment is based on the authors' theory that ozena is of endocrine origin but due primarily to the dysfunction or paralysis of the sympathetic nervous system. Infection is a secondary factor. As an excitant of the sympathetic and vasodilator, acetylcholin may be used, injected intramuscularly. Or irradiation of the lumbar region by Zimmern's method is used to stimulate the lumbar sympathetic and the suprarenal cortex. Four treatments with a total dosage of 1,600 to 2,000 R are given in eight to ten days; a second series is given in ten days; and a third series after an interval of fifteen to twenty days. These treatments produce a definite improvement in the nasal condition and the secretions become more fluid, but crusts and odor do not disappear until bacteriophage is given. A bacteriophage has been prepared against the various bacteria found in the nasal crusts from patients with ozena; three injections of this phage at intervals of two days are given, preferably into the inferior turbinate. At the time of each injection, 10 c.c. of the patient's blood is withdrawn and re-injected immediately into the thigh (to counteract the activity of the antiphage). Of 58 cases of atypical ozena treated by this method, 65 per cent. have been entirely relieved of symptoms; and the remainder improved.

Diagnosis of Laryngeal Disease

L. R. Boies (*Minnesota Medicine*, 16:101, February, 1933) notes that in the adult, symptoms that indicate the need for laryngeal examination are: A "huskiness," hoarseness or easy fatigue of the voice; inability to "clear the throat of phlegm"; local discomfort in the area of the larynx—rawness, dryness, or sense of a foreign body; dysphagia. The laryngeal examination is made first with the laryngeal mirror, and then by direct laryngoscopy, if there is any doubt as to the presence or the nature of a serious lesion. With the laryngoscope tissue may be obtained for biopsy when necessary. Tuberculosis of the larynx is most frequently found at ages twenty to forty years, and is always associated with pulmonary tuberculosis—a fact that is of aid in diagnosis. After the age of forty-five, cancer of the larynx is the most common and also the most serious lesion. It must be differentiated from tertiary syphilis (gumma); both cancer and gumma may ulcerate in the later stages. Early diagnosis of cancer of the larynx is essential to successful operative treatment; hence the importance of careful laryngeal examination in every patient over forty-five years of age with any suspicious symptoms. Intrinsic cancer of the larynx in its early stage appears at first as a thickening or swelling and progresses to a retraction or cupping in the most prominent part of the swelling; extrinsic cancer appears at first as a dusky red uniform swelling. In its incipency the latter causes only vague symptoms of local discomfort and no change in the voice; and hence is rarely diagnosed in its early stage.

Pyemia Following Acute Tonsillar Infections

H. Rubin (*Archives of Otolaryngology*, 17:183, February, 1933) reports 4 cases of pyemia following tonsillar infection and presents a review of the literature. He notes that only a few cases have been reported in American literature, but that the German literature shows many reports of such cases. The chief symptoms are a chill or chills occurring from two to three days after the onset of the sore throat to a week or two after the throat symptoms have subsided; and a swelling along the anterior part of the sternocleidomastoid muscle or over the parotid region. When the diagnosis is established the parapharyngeal space should always be explored, but there is much difference of opinion as to the further management of

these cases, and whether ligation (or resection) of the jugular vein is always necessary or not. Of the author's 4 cases, 3 died; in 2 of these autopsy showed multiple abscesses of the lungs, and one of these had a thrombus in the lateral sinus. In the third case there was a complicating chronic otitis media on the right side, while there was an extensive jugular thrombosis on the left side; the Toby-Ager test was used to determine on which side the thrombosis was. This patient appeared to be recovering for three days after operation (with resection of the thrombosed portion of the jugular vein), but died on the fourth day. In the case that recovered, the jugular vein was not ligated.

The Tonsillectomized Throat

G. B. McAuliffe (*Medical Journal and Record*, 137:155, Feb. 15, 1933) notes that in the majority of cases in which tonsillectomy has been done there are no sequelae and the tonsillar fossa appears normal and healthy, but there is a certain percentage of patients who complain of dry throat or vocal fatigue. The reason for dryness of the throat is uncertain, but the absence of mucous membrane in the fossa appears to the author to be a sufficient anatomical explanation. Injury to the pillars seems to be the cause of voice tire. Other sequelae sometimes observed in the tonsillectomized are cicatricial contractions and hypertrophy of lymphoid tissue in the pharynx. The author has seen some cases in which the tonsillar fossa is covered with "a sheet of connective tissue" with islands of lymphoid tissue. In such cases the patient has all the discomfort and malaise of a tonsillitis when the throat becomes inflamed, without the tonsils. Such results are to be attributed to poor surgery, and show the need of care and skill in performing the tonsil operation. The author is of the opinion that tonsillectomy should be done only if the tonsils are definitely proved to be diseased; diagnosis of infected tonsils, he believes, is often made too hastily; and tonsillectomy done unnecessarily.

Otology

Otitis Media In Scarlet Fever

H. J. Williams (*Archives of Otolaryngology*, 17:235, February, 1933) reports that of 14,733 patients with scarlet fever admitted to the Philadelphia Hospital for Contagious Diseases in 1922 to 1929, there were 1,535, or 10.8 per cent, who developed suppurative otitis media; in 167 of these cases, mastoiditis requiring simple mastoidectomy developed. The otitis was bilateral in approximately one-third of the 1,535 cases; but the mastoiditis was bilateral in only 10 cases. Myringotomy was done on 858 ears before the tympanic membrane ruptured and on 233 cases after it ruptured. The type of myringotomy used was a free linear incision; the performance of this operation either before or after rupture of the tympanic membrane tended to reduce the incidence of mastoiditis. Repeated incision was rarely of value. Of the 1,535 patients with otitis media, 91.5 per cent. were children under ten years of age. The peculiarity of the Eustachian tube in the child, the presence of pharyngeal and faucial tonsils, and the occurrence of paranasal sinusitis predispose to the development of aural complications. Aural complications in these cases of scarlet fever developed at any time in the course of the disease. There was no great tendency for the disease to extend from the mastoid to the meninges, as only 7 cases in the entire series developed meningitis. Not infrequently the infection passed through the middle ear, producing a postauricular edema, redness or subperiosteal abscess and leaving the tympanic membrane intact. The mortality in the 1,535 cases of scarlet fever with otitis media was 4 per cent., in the 167 cases in which mastoidectomy was done 10.8 per cent.

Toxemia and Otitis Media in Infants

M. Salzberger and E. Rabinovici (*Monatsschrift für Ohrenheilkunde und Laryngo-Rhinologie*, 67:188, February, 1933) report that in 99 infants who showed alimentary toxemia (vomiting, diarrhea, loss of appetite, usually slight fever), 82 showed definite signs of otitis on careful examination, although no symptoms of ear disease had been noted. In 66 cases there was a suppurative otitis media and in the remainder a catarrhal otitis. In cases in which pus was obtained on myringotomy, it was noted that the general condition of the child frequently improved, when no other treatment had been effective. In cases in which no pus was obtained, the prognosis was often very unfavorable. In 27 cases a mastoidectomy was done; in these cases the pus was not under pressure as is usual in acute mastoiditis; in some cases no pus was visible. Of these 27 cases, 8 recovered. Of the entire group with ear involvement 37 recovered. The authors are of the opinion that ear infection is an important etiological factor in the toxemia of infants; and that if myringotomy does not provide free drainage and relieve the symptoms, exploration of the mastoid is justified.

The Latent Mastoid as a Cause of Chronic Aural Sepsis

G. Chubb (*British Medical Journal*, 1:94, Jan. 21, 1933) notes that in most cases of acute otitis media, the Eustachian tube is the pathway of infection. As this becomes obstructed relatively early, the inflammatory exudate is under pressure; and it is probable that the mastoid antrum rarely escapes infection. Yet typical symptoms of mastoiditis do not develop in all these cases. The author is of the opinion that the mastoid infection more frequently remains latent and is not diagnosed. In many of these cases after an attack of acute otitis media, a chronic discharge develops. In the cases in which the author has done the cortical mastoid operation because of a persistent ear discharge, he has found only 2 cases in which the mastoid was not frankly purulent. In some of these cases, an acute exacerbation of the otitis may be accompanied by definite symptoms of mastoid involvement; in others there may be signs of spread of the infection into the lateral sinus or the meninges; but when the mastoid is opened in such cases it shows signs of a chronic inflammatory process—a latent infection of longer standing than the acute symptoms would indicate. The author is of the opinion that the latent mastoid infection in such cases is the cause of the chronic aural infection and discharge. Not every case of persistent aural discharge following an acute otitis media can be attributed to a persistent mastoid infection, but this possibility should be kept in mind in considering the treatment of these cases.

Spontaneous Perforation of the Sigmoid Sinus Following the Mastoid Operation

A. J. Smith (*Archives of Otolaryngology*, 17:43, January, 1933) notes that his experience leads him to conclude that septic invasion of the lateral sinus occurs in slightly over 2 per cent. of suppurative mastoid inflammations. In one series of 646 cases operated over a period of ten years at St. John's Riverside Hospital of Yonkers, N. Y., septic infection of the lateral sinus occurred in 12 cases. The incidence was higher in mastoiditis following contagious diseases, especially scarlet fever. In 3 cases perforation of the sigmoid sinus occurred following the mastoid operation; in one of these the otitis and mastoiditis followed measles, in one tonsillitis, in one scarlet fever. In the latter the mastoiditis was bilateral, in the other 2 cases unilateral. In all these cases the mastoid operation showed extensive bony necrosis, which made it necessary to expose the sinus widely; after operation the wounds continued to suppurate. In the bilateral (scarlet fever) cases the "tissues died en masse;" and meningitis developed, causing the patient's death. In all these cases a small, dark-colored, beadlike protuberance was seen to jut out from the sinus wall; this was the inner coat of the vessel protruding through an ulcerated area in the outer wall. In two to four days rupture occurred followed by hemorrhage from the sinus. Following rupture the sinus was slit open well beyond the necrosed area and packed with iodoform gauze; the jugular vein was resected or ligated. Both the patients with unilateral involvement recovered, but convalescence was complicated and protracted. In these 2 cases there was no evidence of infection of the blood stream until a few hours before actual rupture of the sinus wall. In none of the sinuses was there any evidence of thrombus formation. From his study of these cases, the author concludes that: Without involvement of the endothelial lining of a vessel neither thrombosis nor infection of the blood stream can occur. In an exposed sinus, rupture of the wall will almost invariably occur before a thrombus can form. Infections by this route are rare, representing only a small proportion of the total number of infections of the sigmoid sinus.

Atypical Bilateral Mastoiditis

H. M. Scheer and W. Z. Jerome (*Medical Journal and Record*, 137:160, February 15, 1933) report a case in which tight nasal packing was necessary to control nasal bleeding; the packing was removed in two and a half days; an ulcerated area on the septum was treated with silver nitrate. After the patient had shown considerable improvement, he developed fever of a septic type and severe frontal headache. There was no pain in the ears, but the ear drums had lost their landmarks; paracentesis yielded a thick pus from both ears. There was no tenderness over the mastoid, but the X-ray showed evidence of inflammatory changes; the blood culture was positive for *Streptococcus hemolyticus*. Both mastoids were operated, the left first; both were full of pus and necrotic granulation. The lateral sinus on each side was explored but showed no indication of perisinus abscess or sinus thrombosis. In this case the prolonged retention of the nasal packing was evidently the source of infection, which travelling through the Eustachian tube, affected the middle ear but slightly, but infected the mas-

(Continued on page 154)

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The New Deal

The new administration is only a few weeks old and miracles are in the air. President Roosevelt has cut a great figure; as a leader he stands alone. His short messages to Congress have been rewarded by quick action.

The effects of the banking holiday will linger, of course. Fear is still paralyzing some of us but we are coming to. We are slowly being pulled out of a very bad hole.

There are several months of rough sailing ahead of us. Physicians are as badly affected as any other professional group, but we should remember that the worst is probably over.

One of the many causes of this depression is foreign; a great deal of economic and political unpleasantness can be traced back to unreasonable demands on Germany, which was ordered to pay off an amount equivalent to three times the gold in the world.

The present turmoil in that country is not as startling as it may seem; a nation's youth have been fed up with failure and chaos, half believing wild promises of achievement—a despairing youth have eaten hope from

a spoon, realizing that, even if they are doomed, desperate chances are exciting. After all, if one must go to hell, one might as well go on one road as on another: the Nazi route is new and interesting. They are not in a state of perfect balance and cannot see the handwriting on the wall. You cannot go into reverse for any length of time without crashing, and they are headed for a pit, clearing the way, in fact, for Soviet supremacy.

When the depression is over, what will the new era offer to the medical profession? Already medical centers have swallowed up a large percentage of patients who would otherwise have gone to individual physicians.

There is a growing feeling that the family doctor will retain his place. He will be the one to practice preventive medicine. However, he must increase his efficiency to the point where he can more than hold his own. He must study; he must have the latest equipment; he must be prepared to make an accurate diagnosis in a short time. In other words, he must make himself indispensable in order to survive. During these dark hours we should be planning for the future.

M. W. T.

A Modest Proposal: The Contributive or Cooperative Field Staff

A hospital receives by far the greatest proportion of its patients through its own staff, but even where a staff is rigidly closed and lacks even a courtesy staff, a good many patients find their way in at the hands of well-disposed extramural practitioners having no formal connection with either hospital or clinic.

Besides posting in the staff room the names of such extramural practitioners, when they send in patients, along with the names of regular staff men doing likewise—as is now the practice here and there—it would seem that still other good-will gestures might be made, to the common advantage and solidarity of all concerned and as a matter of common courtesy.

For example, there would seem to be no reason why the admittance of a patient referred by an extramural practitioner should not be acknowledged by letter and the doctor thanked by the Superintendent and apprised of the posting of his name in the staff room by way of credit (which he would otherwise, probably, not know about).

It would seem that a valuable liaison might be established between a definitely organized extramural staff (we dare to use the term staff) and the hospital center, not only along the lines indicated, but in the field of education. This contributive field staff, composed of reputable members of the organized profession, should be brought into close affiliation with the hospital as a natural center indebted to the extramural staff for many of its patients and therefore obligated, as a matter of cold fact, to make some return to its creditors. This, it seems to us, affords a partial solution of certain educational problems and of hospital economics as well.

The Contributive Field Staff should be listed in the publications of the hospital, along with the regular attending staff. No compromise is involved in this proposal; nothing has been said that would suggest any allocation of patients differing from the present system, and the issue of enlarging courtesy staffs is not under consideration at all. But we cannot assume that evolution has reached an end in this field.

In the plans for the rehabilitation of the general practitioner let this type of cooperative staff membership

be taken into account as tending to restore old dignities. Moreover, it would tend strongly to return discharged patients into the hands of their family physicians.

A most practical point is that in these days of economic stress hospitals must be aided in every way possible, else they will cease to be of use to closed staffs or anybody else. Otherwise there will not only be empty beds—there will be no hospitals.

Study the deficits and awake!

Symbolizing a Return to Social Sanity

The virtual removal of restrictions upon the practitioner prescribing alcohol is a refreshing proof that the contempt in which the medical profession has been held for a number of years by law-making bodies has ceased to be operative. Whatever the reason for this change, we take it as an augury of a sane attitude on the part of the powers that be toward socialization schemes that would tend to humiliate the profession far more than did prohibition. Socialization would imply complete lack of respect; indeed, it would mean a determination to degrade.

It would seem that we are recovering prestige that appeared lost in large measure.

Two Medical Types

The medical man who, altogether too often, is found taking a leading rôle in movements tending to bureaucracy, socialization and "cattleization" is seldom, if ever, an actual practitioner.

What is the matter with these medical uplifters?

The matter is that they are not primarily interested in the sick man—or even in his sickness. They have no natural feeling for the bedside or for the sick individual. They also lack a direct interest in disease itself. They do not know or care about scientific medicine personalized and humanized. They have no patience with the clinical details regarding John Robinson that so tirelessly absorb the doctor who is vitally interested in sickness as it reveals itself in the individual.

On the other hand, the doctor who is a practitioner by nature, as it were, finds it extremely difficult to study and master the problems that are factitiously created by the bureaucratically-minded medical man, absolutely preferring the direct, personal, highly humanized care of the sick individual.

The bureaucrat takes no interest in the blood count of John Smith himself nor in the insulin requirement of Jane Brown herself. His mind is full of mass production schemes, mechanizations, politics and medical Hitlerism. His alibi is "a social purpose" (euphemism for socialistic purpose). This doctrinaire's projects, so far as they have yet been promulgated, are impracticable, inept, economically ruinous, tainted with commercialism, and always professionally degrading. Compare him with the Minots, the Murphys and the workaday practitioners of the country and weep.

Let us glory unashamedly in our proper rôle. Let us despise without dissimulation the uplifter and the bureaucratizer. Let us continue to dedicate our technic with devotion, thoroughness and skill, despite the hubbub of exhibitionists in the market places and the occasional entrance of gas bombs.

Strange as it may seem, most malpractice suits follow small fees, and when the doctor did not insist on payment for his services.

Miscellany

After Galen

Only the Lion and the Cock,
As Galen says, withstand Love's shock.
So, Dearest, do not think me rude
If I yield now to lassitude,
But sympathize with me. I know
You would not have me roar, or crow.

Wild Apples,

by Dr. Oliver St. John Gogarty.

Contemporary Progress

(Continued from page 152)

toid cells through the aditus. Although there was a blood stream infection there was no sinus thrombosis; the authors are of the opinion that if blood cultures were made more frequently in severe cases of mastoiditis, many such cultures would be positive. If the patient's resistance is poor and the infection virulent, bacteria from the mastoid may invade the lateral sinus and pass through the sinus wall without forming a thrombus. This case illustrates the fact that a diagnosis of acute mastoiditis can be made without the presence of all the classical symptoms.

Identical Hearing Defects in Identical Twins

F. H. Rodin (*Archives of Otolaryngology*, 17:179, February, 1933) reports a study of identical twins—girls aged fifteen years. Both had had scarlet fever at the age of six years, and since that time the hearing had begun to decrease, although there was no ear discharge or other evidence of otitis. Both complained of tinnitus of the same type—"like a bee buzzing." Hearing tests showed an almost identical hearing defect in the two twins—a conductive deafness with negative Rinne and normal Schwabach. The audiograms were practically identical. A diagnosis of otosclerosis was made on the basis of the insidious type of deafness without apparent cause, the results of the hearing tests, and the normal tympanic membranes. There was no history of any deafness in the family. The author finds only one other study of a hearing defect in identical twins—that of Macfarlan (1927) in twin sisters of middle age—in which the audiograms showed the same loss of hearing.

Gynecology

Early Diagnosis of Carcinoma of the Cervix

W. Schiller of Vienna (*Surgery, Gynecology and Obstetrics*, 56:210, February, 1933), in his histological studies of many uterine cervixes removed at operation, has found that in most cases of typical carcinoma, there is a small inflammatory zone separating the growth from the normal epithelium. This "carcinomatous layer" while it does not invade the deeper tissues shows the histological characteristics of carcinoma—atypical and polymorphous cells and often many mitotic figures. This carcinomatous layer, Schiller believes, is a part of the carcinoma; in the smaller and earlier carcinomas, this carcinomatous layer is larger than the penetrating growth itself; and in the youngest type of malignancy there is only this carcinomatous layer and no deep penetration. All transitional stages between this youngest stage of carcinoma and the advanced carcinoma with its narrow carcinomatous layer have been observed. The "carcinomatous layer," even though it does not penetrate the deeper tissues, should be considered as "young carcinoma" or the "earliest stage of carcinoma" and not as "precancerous." For the successful treatment of carcinoma of the cervix, it is essential that a diagnosis be made in the earliest possible stage. While examination of the cervix may show suspicious spots, the author has devised a method of locating such spots more easily by "vital staining with Lugol's solution." When the cervix is painted with ordinary Lugol's solution, the normal epithelium shows a deep brown color, and where there is any pathological change the epithelium remains white. Biopsy specimens are taken from such white spots to determine whether early carcinoma is present or not. If an incipient carcinoma is found, operation is done at once in Schiller's clinic; in older women a panhysterectomy; in younger women an amputation of the cervix. If careful histological examination shows that the latter operation did not completely and radically remove the carcinomatous tissue, the uterus is removed and a part of

the vagina. Each patient coming to the gynecological clinic is examined with the iodine method; the author suggests that every woman should have an examination two or three times a year by this method. It would then be possible to diagnose carcinoma of the cervix in its earliest stage and raise the percentage of complete cures to 95 or 100 per cent.

H. Schmitz (*Southern Medical Journal*, 26:54, January, 1933) has found that Schiller's iodine test is of definite aid in the recognition of lesions of the cervix. As early carcinoma of the cervix does not give rise to any symptoms, it is important that women who have had any infection of the genital organs and those who have had full-term labors or abortions should be kept under observation and the cervix examined periodically until the physician is assured that the cervix is normal. Women patients should be urged to have an examination of the cervix made at least once a year. If nodules or ulcers that bleed on touch are found, a biopsy should be done. Only by such means can early cancer of the cervix be discovered.

Theelin Injections In Castrated Women

A. A. Werner (*Journal of the American Medical Association*, 100:633, March 4, 1933) reports the use of theelin injections in 5 women who had had complete bilateral ovariectomy, and in whom amenorrhea was complete. All patients showed atrophy of the breasts and definite symptoms of ovarian hypofunction. One of the patients had had the uterus removed by subtotal hysterectomy. Theelin was given by intramuscular injections in doses of 4 c.c. (200 rat units daily) for the first twenty-eight days; 6 c.c. for the second twenty-eight day period and 8 c.c. for the third twenty-eight day period. When the larger doses were given the site of the injection was often somewhat tender, but only one patient showed any induration. Uterine bleeding occurred in all but the one patient from whom the uterus had been removed; all showed increased vascularity of the cervix; and breast changes. The uterine bleeding was accompanied by the usual signs and symptoms of the menstrual period. In all patients, the subjective symptoms of ovarian hypofunction were relieved early in the course of treatment; and 4 of the 5 women reported a definite increase of libido. Castration showed the uterine endometrium to be atrophic before treatment. After the administration of theelin there was a hyperplasia of the endometrium and redifferentiation of the stroma to the normal type of the interval stage. There was no sign of the usual premenstrual change in any case, although some of the sections were obtained when there was active uterine bleeding. The author concludes that larger doses of theelin can be given intramuscularly without ill effect; and that this ovarian hormone restores the breasts and genital tract of women to an apparently normal state after castration atrophy has occurred, and relieves the subjective symptoms that develop after bilateral ovariectomy.

Anterior Pituitary Hormone and Amenorrhea

P. Witz (*Zeitschrift für Geburtshilfe und Gynäkologie*, 104:293, Jan. 31, 1933) reports a study of the anterior pituitary hormone in the urine of women by the Aschheim-Zondek method. The A hormone is that which hastens the development of the ovarian follicle; the B hormone the transformation of the follicle into a corpus luteum. In lactating women after labor, if menstruation does not begin, the A hormone is present in the urine in increased amounts; it may be present in as large amounts as in castrated women. In non-pregnant women with amenorrhea, the A hormone is found in increased amounts in certain cases; if it was present in amounts of 110 mouse units or more folliculin could not be demonstrated in the urine by the method of Frank and Goldberger. If folliculin is present in amounts of from 10 to 35 mouse units, the A hormone of the anterior pituitary is not present in demonstrable amounts. The study of the hormone in the urine in cases of amenorrhea may indicate suitable therapeutic procedures; the hormone which is excreted in the greatest amounts would appear to be indicated.

The Sedimentation Test, Filament-Nonfilament, and the White Cell Count in Gynecology

H. W. Yates and his associates at the Receiving Hospital of Detroit (*American Journal of Obstetrics and Gynecology*, 25:203, February, 1933) report the use of the red cell sedimentation test, the filament-nonfilament count of the neutrophile cells and the total white cell count in gynecological cases requiring operation. A definite correlation was found between the pathological diagnosis and the sedimentation rate in 91.4 per cent; between the pathological findings and the filament-nonfilament count in 77.2 per cent; but the total white blood cell count showed only 67.8 per cent accuracy. In infectious conditions there was a definite correlation of the sedimentation rate and the filament-nonfilament count, especially in the acute and subacute cases. The filament-nonfilament count varied as a rule with the severity of the infection, but the nonfilament count

was relatively low in patients with poor resistance. Cases of abortion showed the most bizarre white cell counts, sedimentation rates and filament counts. Cases of septic abortion and those with severe anemia following abortion showed rapid sedimentation and increased nonfilament cells. Cases of abortion, complete or incomplete, without infection showed no correlation between the tests. The authors conclude that the total white cell count is not of much diagnostic value in gynecological conditions, but that the sedimentation rate and the filament-nonfilament count and especially the former, are of definite value in diagnosis. The filament-nonfilament count, they have found, is more accurate than the usual differential white cell count.

Roentgenography In Gynecological and Obstetrical Diagnosis

J. Jarcho (*Medical Journal and Record*, 137:235, March 15, 1933) discusses his experience with the use of roentgenography in gynecological and obstetrical diagnosis. He has found that the combined method of inducing pneumoperitoneum by peruterine insufflation and the peruterine injection of iodized oil gives the best results. He has devised an apparatus—the pressometer—for the introduction of the gas and the opaque medium without change of equipment. The use of this method is contraindicated in cardiac disease, gonorrhea, and acute tubal inflammation; in menstruation and profuse bleeding; in malignant growths of the uterus; and in pregnancy unless therapeutic abortion is contemplated. The combined method outlines clearly the inside and the outside of the uterus; shows neoplasms of the uterus and the adnexa; not only determines the patency or non-patency of the tubes but also indicates definitely the site of the obstruction. Without the introduction of gas or an opaque medium, the roentgen-ray examination enables a definite diagnosis of pregnancy to be made in the fifth month; in the author's experience he has established the diagnosis of pregnancy as early as four and a half months. This method is of special value in differentiating between pregnancy and uterine tumors. In early pregnancy the entire fetal skeleton is never demonstrable and the roentgenogram must be carefully studied to determine the presence of the fetal bones. In addition roentgenography in obstetrics shows the presence of twins and of fetal monsters; furnishes a reliable method of determining fetal age by a study of the ossification centers; but it is most valuable as a method of accurate pelvimetry and cephalometry, for which the author has developed a special technique modifying Thom's procedure.

Obstetrics

Posterior Pituitary Extracts In Labor.

K. Traube (*Monatsschrift für Geburtshilfe und Gynäkologie*, 93:301, February, 1933) reports the use of two posterior pituitary extracts in obstetric cases at the University of Prague. Thymophysin (a combined posterior pituitary and thymus extract) was used in 734 cases; and a fractional pituitary extract (orasthin) with the vasopressor fraction eliminated in 120 cases. Thymophysin was used chiefly in the first stage of labor—in 602 cases; a small dose of 5 units was usually sufficient to cause strong rhythmic contractions in cases where pains were weak; occasionally the dose had to be repeated. Labor was usually shortened, especially in elderly primiparae. Especially good results were obtained in cases with slight degrees of pelvic contractions; in 50 such cases given one or more injections of thymophysin, only 3 required operative delivery. In the years in which thymophysin has been used in the Clinic, the number of cases requiring forceps delivery has steadily diminished—from 6.2 per cent. to 3.2 per cent. in the year 1931. In the author's experience thymophysin gave better results than any other pituitary preparation used in obstetrics; and is especially useful in the first stage of labor when pains are weak. Orasthin was found to be almost as effective as thymophysin in the first stage of labor; in the second stage it was as effective, but no more so than other pituitary extracts. Its chief advantage is that it does not raise the blood pressure, owing to the elimination of the pressor fraction, and thus can be used in patients with eclampsia, renal and cardiovascular disease, when indicated.

M. G. Der Brucke (*American Journal of Surgery*, 19:429, March, 1933) reports the use of thymophysin in the first stage of labor in 65 cases in three Brooklyn hospitals. It was found that thymophysin stimulated rhythmic uterine contractions in 2.7 to 5.9 minutes in multiparae and 4.25 to 5 minutes in primiparae; and that the pains recurred rhythmically every 1.6 to 2.77 minutes in multiparae, and every 2.5 to 3.25 minutes or 2.8 to 3.26 minutes in primiparae, depending on the dose (one-half or one ampoule). Full dilatation was obtained in multiparae in 3 hours and 36 minutes with the half ampoule; and this time was reduced only 8 minutes with the full ampoule dose. In primiparae, the time necessary for full dilatation was 6 hours and 54 minutes with the half ampoule dose but was reduced to

5 hours and 12 minutes with a full ampoule dose. With the full ampoule dose the systolic pressure rose an average of 16 mm. Hg in both primiparae and multiparae and the diastolic 9 to 10 mm. in the primiparae. In the multiparae the diastolic pressure rose only 4 mm. Hg. with either the full ampoule or the half ampoule dose; and the systolic only 6 mm. with the latter. This indicates a definite loss of cardiovascular reserve in the multiparae. The half ampoule dose in this group is as effective as the larger dose and with less danger to the right heart. There was one maternal death in this series due possibly to cardiovascular failure, and one fatal death, due in part to an abnormal presentation and probably to other factors. The author concludes that thymophysin is not indicated where labor is progressing rapidly and satisfactorily; where the cervical dilatation is four fingers or over the labor is progressing; where rupture of the membranes is sufficient; where there is any malposition; or where there is any doubt as to the "cardiovascular competency" of the patient. In other cases, thymophysin has a definite value for the trained obstetrician, although in the author's opinion, its use may well be restricted to hospitalized cases until its true physiological attitude is better understood.

A Type of Pelvis Associated with the Occipito-Posterior Position

H. Thoms (*Surgery, Gynecology and Obstetrics*, 56:97, January, 1933) in his roentgen pelvimetry and cephalometry studies has found that the type of pelvis with relative increase in the antero-posterior diameter as compared with the transverse diameters is of more common occurrence than is generally realized. In 20 such pelvises studied in the past year the transverse diameters averaged 13.1 cm. less than the normal 13 cm. and the conjugata vera 1.75 more than the normal 11 cm. In only 2 cases did the transverse diameter of the superior strait exceed the antero-posterior diameter by as much as 1 cm.; in one case it was actually less by 2.5 cm. (a true dolichopelvic pelvis). In every case this type of pelvis was associated with primary or persistent occipito-posterior position; and it is evident that with this type of pelvis the occiput assumes a primary posterior position much more readily than with the normal female pelvis. The author claims that in the practice of modern scientific obstetrics, an accurate survey of the pelvis of every primipara should be made, and this can be done by roentgen pelvimetry, especially in so far as the superior strait is concerned.

Uterine Musculature at Term

L. Zweibel (*Surgery, Gynecology and Obstetrics*, 56:646, March, 1933) reports a histological study of the uterine musculature at term in normal uteri removed following Cesarean section or at autopsy postpartum, a uterus removed at post-mortem Cesarean section without labor, and uteri with placenta praevia and placenta accreta and an atonic uterus. In the normal uteri, the muscle fibers were heavy, very long and deep staining; there was little interfascicular connective tissue and a slightly greater amount of interfascicular connective tissue, with an average of 22.4 to 30.5 fibers per mm. in the width. In the uterus removed at postmortem Cesarean section from a woman killed in an accident near term but before labor, the fibers were long and deep staining but thin. In a uterus with placenta praevia, the muscular fibers were of the same type as in normal uteri; in the uterus with placenta accreta the longitudinal fibers were shorter and their transverse sections smaller; staining was unequal. In the atonic uterus, the most marked changes occurred; the fibers were short and thin and did not take the stain well; in some areas there was a small amount of interfascicular connective tissue, in others a very large amount; there was everywhere a large amount of interfascicular connective tissue.

Delivery After a Salt-Free Diet

L. Israel (*Bulletin de la Société d'obstétrique et de gynécologie de Paris*, No. 1:111, January, 1933) has delivered 20 women who have followed a strictly salt-free diet for a month or more prior to labor. He has found that the duration of labor, and especially of the first stage, is definitely shortened by the salt-free diet and that the pain of labor is less, especially in the first stage. Better results are obtained with a strictly salt-free diet than with merely a reduction in the amount of salt used. Even with a salt-free diet the blood chloride is not diminished below normal limits. The relief of pain by this regimen the author attributes to diminished excitability of the nerve centers; the shortening of labor to a modification of the water metabolism.

Inversion of the Puerperal Uterus

E. d'Errico (*New England Journal of Medicine*, 208:1, Jan. 5, 1933) reports 8 cases of acute inversion of the puerperal

uterus in women delivered at the Boston Lying-In Hospital and 3 other cases delivered at home and subsequently hospitalized. Of the 11 cases, 4 died, 2 of them within 2 hours after delivery. The cause of death in each case was shock and exsanguination; there was no sepsis. The author is of the opinion that acute inversion of the puerperal uterus is of more common occurrence than is generally believed. It may occur in well-supervised clinics and in very competent hands. The possibility of this complication and the importance of its early diagnosis should be emphasized. The chief symptoms are hemorrhage, which may be slight or profuse; lower abdominal pain, usually sharp and cramp-like; and shock. If any of these symptoms are noted, bimanual pelvic examination should be made; and if necessary to establish the diagnosis, vaginal examination. With the latter the risk from sepsis is very much less than from overlooking a possible inversion. The bimanual examination shows the fundus replaced by an indentation, a cupping or a crater; if the inversion is complete a mass will be found in the vagina and may appear at the introitus. If the condition is discovered early manual replacement is the treatment of choice; it should be done with the patient under "relaxing, surgical anesthesia." If this fails, or if the condition has been present several hours and the ring formation is hard and tight, abdominal replacement by Huntington's technique is usually indicated. In cases with sepsis a vaginal hysterectomy may be necessary.

Exogenous Throat Streptococci and Puerperal Infections

F. S. Kellog and A. T. Hertig (*American Journal of Obstetrics and Gynecology*, 25:213, February, 1933) report 3 cases in which the evidence indicated that puerperal sepsis was due to infection by an organism present in the throat of one of the attendants. In the last 2 cases the evidence was particularly clear, as the two patients had no contact with each other, but both had been attended by a nurse who was found to harbor hemolytic streptococci in her throat, and had symptoms of a mild upper respiratory infection. The hemolytic streptococci isolated from the 2 patients were culturally similar to the organism isolated from the throat of the nurse. Rules for masking and careful asepsis of the hands for all nurses attending puerperal cases at the Florence Crittenden Home, Boston, have been adopted on the basis of these findings.

Comments on Internship

According to W. C. RAPPLEYE, New York (*Journal A. M. A.*, 25, 1933), the internship has come to be widely regarded, in this country as a part of the basic training for the practice of medicine, as attested by the facts that about 95 per cent of recent graduates voluntarily take a hospital experience of one year or longer, that seventeen states require the internship as a prerequisite for admission to the licensing examinations, and that a similar number of medical schools in the United States and Canada require it before granting the degree of Doctor of Medicine. The type and arrangement of the hospital period should not be standardized, however. It is important that the educational features of the internship should not be rigid or uniform for all hospitals but should provide a variety of opportunities of high quality adapted to the educational needs, previous preparation, and life programs of different individuals. The internship is only a part of the whole scheme of medicine and, as such, several kinds of internships will best meet the requirements of different students. There are 696 hospitals, representing 221,174 hospital beds and offering 6,261 internships, which are approved by the American Medical Association (1932). The mere fact that a hospital is a good hospital does not necessarily mean that it provides a satisfactory internship, for the latter requires an interest on the part of the staff in the training of the young physician and an ability to provide him with a satisfactory educational experience. If the internship is to be successful as an educational venture, some individual or group on the staff of the hospital should be responsible for seeing that opportunities are actually provided for the intellectual and professional development of the student, and that the work of the intern is properly supervised by responsible members of the staff, particularly in regard to the discussion of cases, differential diagnosis, proper treatment, and the use of the laboratory, library and other facilities in the study of patients. Only about 10 per cent of patients are hospitalized. The great majority of sick persons are not obliged to go to a hospital. Outpatient services should be used as much as possible to assist the intern in becoming acquainted with the more common illnesses and with the wide range of social and economic factors which are often important in diagnosis and treatment.

MEDICAL BOOK NEWS

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REVIEWS

Medicine in Virginia in the Eighteenth Century

MEDICINE IN VIRGINIA IN THE EIGHTEENTH CENTURY. By Wyndham B. Blanton, M.D. Richmond, Va., Garrett & Massie, Inc., 1931. 449 pages, illustrated. 4to. Cloth, \$7.50.

In the Eighteenth Century, Virginia represented a high degree of American culture. Its people were ethnically similar to those of New England, but superior in their freedom from the bigotry of puritanism. The absence of the puritanical obsession made all the difference between Virginia and New England. Virginia possessed a culture in which the intellect was esteemed mostly highly.

This Virginian civilization developed doctors who reflected the character of the people from whom they sprang. Many of them went to England and Scotland to study medicine. Some were prized so highly that they were invited to remain as teachers in Great Britain. There were practitioners among them, who rode the hills of Virginia, who were members of the Royal College and eminently able as physicians and surgeons.

This book itself is an evidence that that ancient culture has survived. It is rich in information on such subjects as the epidemic diseases of the time and how they were treated, medical education, the literature of the period, plantation medicine, and quackery. The educated planters possessed excellent libraries, many of which contained the standard medical works. Thus the library of one planter numbered some 3,500 volumes, among which were 141 books on medicine. Those were the days when farming was a dignified profession and practiced by men of superior quality. The average cultured layman of Virginia then had a much larger proportion of medical texts on his shelves than has the best educated layman now.

There were men of distinction among the profession of those days. They thought scientifically and took original steps. They were bold and resourceful men. Jesse Bennett, who in 1794 successfully performed Caesarean section on his own wife and removed both ovaries at the same time, preceded McDowell in the latter operation by some fifteen years.

The author throws light upon the medical care of the slaves, and contributes data that illuminate the befuddled history upon which the Union was supposed to have been saved.

It is gratifying to find Thomas Jefferson, that consummate flower of American character, in a medical book. His interest in medical problems and his devotion to science bring this great man close to medicine. It was he who established the department of medicine in the University of Virginia. He saw the need of making medical teaching also accessible to the non-medical student for its cultural value.

This book is a fine contribution to the history of a people to whom medicine owes much, and of a period that bred sterling characters. Dr. Blanton should have found joy and satisfaction for himself in writing it, and his profession will find the same rewards in its perusal.

JAMES PETER WARBASE.

Posture, Its Relation to Health

POSTURE, ITS RELATION TO HEALTH. By Frank D. Dickson, M.D. Philadelphia, J. B. Lippincott Company [1931]. 213 pages, illustrated. 12mo. Fabrikoid, \$5.00. (Everyday Practice Series.)

This book is one of a series on popular medical problems edited by Dr. Harlow Brooks in the Every Day Practice Series. It is a mixture of rather definite orthopedic knowledge and its bearing on general medical practice, and as such fills a need in medical literature. If it calls the attention of doctors to the far-reaching effect of body mechanics in the upright position

to the physical condition of the patient, it will do much for the welfare of the general public. Just what is the correct posture of a given individual—weight for age—is a debatable point, but if only the medical man be excited along these lines fewer drugs and vaccines will be used and more true physio-therapy. The trainer has much to teach the doctor.

JACQUES C. RUSHMORE.

Medical Jurisprudence

MEDICAL JURISPRUDENCE. By Carl Scheffel, Ph.B., M.D. Philadelphia, P. Blakiston's Son & Co., Inc. [c. 1931]. 313 pages. 8vo. Cloth, \$2.50.

The book presents a complete resumé of the law as it appertains to the practicing physician. Such subjects as the contractual relationships of physicians to their patients, matters dealing with the law of agency as well as with torts, are fully discussed. Problems dealing with witnesses and evidence as it is related to the doctor fills out a much needed chapter so much in demand by the physician.

There is a review of the law as it involves the practicing doctor and his responsibilities from the criminal point of view. It is not a book that deals primarily with New York law, but rather one that more or less gives a cross section of the basic principles in all other jurisdictions. Thus an attitude, and a broad attitude, of the legal situation as it affects the doctor, is adequately presented.

In general the book recommends itself because of the simplicity of expression and the avoidance of technical terms. Thus the tired physician may read without undue demands upon his attention and at the same time provide a means for his relaxation.

GEORGE I. SWETLOW.

A Text-Book of Pathology

A TEXT-BOOK OF PATHOLOGY. By W. G. MacCallum, M.D. Fifth Edition. Philadelphia, W. B. Saunders Company, 1932. 1212 pages illustrated. 8vo. Cloth, \$10.00.

After reviewing the fifth edition of Dr. MacCallum's Text-Book of Pathology, one is impressed with its up-to-date information. The most recent advances which have been made in the study of the various common diseases are incorporated in this edition. Thus, the chapter on Syphilis includes most of the important work on this subject which appeared in the literature as late as 1932. Similarly, in the chapter on Tuberculosis, subjects such as the "allergic reaction to tuberculosis and its distinction from immunity and resistance in that disease" are included in the text. The author also brings the subject of endocarditis up to the present date. The chapter on diseases of the endocrine glands is actually a summary of the most recent literature dealing with that phase of human pathology.

An additional feature of the fifth edition is the large number of improved illustrations which appear in the text.

MacCallum's Text-Book of Pathology is still the best single volume on pathology available to both student and practitioner.

SILIK H. POLAYES.

Schizophrenia

SCHIZOPHRENIA. By Helge Lundholm, Ph.D. Durham, N. C., Duke University Press, 1932. 117 pages. 8vo. Paper, \$1.00. (Duke University Psychological Monographs, No. 2.)

Psychologists have recently invaded the field of psychiatry and present their views of the different psychoses, which they have studied. The author of this book has published a monograph of the manic depressive psychosis. In the monograph of schizophrenia, the author likewise elucidates the psychologi-

cal aspect of this disorder. It is quite apparent her approach is not so different from the orthodox approach of the average psychiatrist. In fact, she has incorporated the psychoanalytic implication in this morbid disorder.

Therefore, in reading the book one cannot help but feel that the author will probably do well in gaining more experience in the subject and possibly in a decade or so present a revision that will be based on greater experience and more mature judgment.

For physicians there are available a large number of text books which will give them a far greater conception of schizophrenia than the monograph reviewed.

IRVING J. SANDS.

Die Therapie an den Berliner Universitäts-Kliniken

DIE THERAPIE AN DEN BERLINER UNIVERSITÄTS-KLINIKEN. By Wilhelm Croner, M.D., and Heinz Kalk, M.D. 10th Auflage. Berlin, Urban & Schwarzenburg, 1932. 699 pages. 12mo. Cloth, RM. 15.

This is a very interesting book of 699 pages, being the tenth revised edition of the therapeutic methods and measures in vogue at the University Clinic in Berlin. It is interesting as an exponent of German therapeutics at the Reichs-Kapital and also because it amounts, in essence, to a hand-book of the practice of medicine, surgery, gynecology and obstetrics, very similar to the old "Hawthorne's Hand-Book," so familiar to the medical men of a generation ago. To those who read German, it offers a comparison between the methods of the best practitioners in a large German University Center and similar centers in this country. It is a really valuable book, replete with practical remedies and procedures, many of which are in vogue here and others not. The general underlying principles of the book lead one to feel that, after all, we humans are not so unlike in thought and action, no matter where we live.

J. M. VAN COTT.

Our Neurotic Age

OUR NEUROTIC AGE. A Consultation. Edited by Samuel D. Schmalhausen. New York, Farrar & Rinehart, Inc. [c. 1932]. 531 pages. 8vo. Cloth, \$4.00.

At the outset the reviewer recommends this book. It is the type of book which should produce vigorous discussion. On some phases of its subject matter, the quality of the material is of sufficient merit to warrant its use as a reference work.

The contents are treated under four headings as follows: I. Is the normal mind sane? II. Beyond normality. III. The social background of neurosis. IV. Ecce Homo Sapiens.

Its real attractiveness is reflected in the sub-title—"A Consultation," in which the opinions of twenty-seven consultants are given, each of whom is a recognized authority in his own field.

The book cannot be considered too lightly. It requires careful reading, and improves on re-reading. One cannot be too thin-skinned and above all must be tolerant. Religious, moral and psychologic concepts are treated openly, directly and with great sincerity.

Each article is prepared with considerable thoroughness. For example, the authors on "Suicide: Its Motives and Mechanisms" and "Contemporary Literature: A Study in Pathology" must have spent untold time in accumulating and reading material for their studies. The obviousness of this fact commands respect, even if we differ with the conclusions.

The reviewer was particularly pleased with the chapter on "Alcoholism; Normal and Abnormal" because of its skillful handling and largely because we agree with Maynard Shipley. This article deserves a study in itself.

"The Sociological Significance of Racketeering" by Murray Goodwin is timely and pertinent. If this shoe pinches, we should read "We Americans: A Study in Infantilism" by Ernest S. Bates.

It is difficult to improve on the title of the book. It arouses curiosity. Then on concluding the volume, one is forced to agree that the consultants have concurred in a diagnosis, namely the title. We are left to draw our own conclusions as to treatment for the medicine is sure to be very bitter. This book is bound to interest any individual concerned with the problems of today. Where such interest is latent, it should be the very "hypo" needed.

HAROLD R. MERWARTH.

The Art of Anaesthesia

THE ART OF ANAESTHESIA. By Paluel J. Flagg, M.D. Fifth edition. Philadelphia, J. B. Lippincott Company [c. 1932]. 416 pages, illustrated. 8vo. Cloth, \$5.00.

The high repute in which Flagg's book has been held for a decade and a half, and that it has been brought to a fifth edition is a distinct compliment to an American author. Hewitt and Buxton, even Gwathmey, excellent as they were in their time and though still authorities of their day, are no longer

youthful. Flagg made a great bid for popularity by being so explicit in the fundamentals of Anesthesia that he immediately won a place for his book; and now that he includes the non-medical technician amongst his pupils he is still keeping up-to-date. This book is such a contrast to Hewer (whose "recent" period is the same as that covered by the new matter in Flagg) that the two might well be considered complementary. This new edition is of main importance in giving the author opportunity to explain his advocacy of resuscitation methods and his plea for their consideration by city authorities. Avertin also finds a merited place and the barbiturates. On the whole one feels that the author is rather unfriendly to them.

Many beginners enjoy Flagg's book. The particular quality of its consideration of the patient is its great charm. Those of us who value the author's personal acquaintance recognize this as the natural expression of a conscientious and successful worker. May there be five more editions.

A. F. ERDMANN.

Infants and Children

INFANTS AND CHILDREN. Their Feeding and Growth. By Frederick H. Bartlett, M.D. New York, Farrar & Rinehart, Inc. [c. 1932]. 409 pages. 16mo. Cloth, \$1.50.

This is another book on the care of infants by an author who has had a great deal of practical experience. It is somewhat different from other many similar books that have been written during the past few years. In it the mother will find information clearly presented in every detail regarding the feeding of an infant and young child. This material is recorded in an orderly manner, however, but we doubt if many mothers will, from a practical standpoint, be able to apply such a schedule to their children.

THURMAN B. GIVAN.

Radiologic Maxims

RADIOLOGIC MAXIMS. By Harold Swanberg, M.D. Quincy, Ill., Radiological Review Publishing Company, 1932. 127 pages. 12mo. Cloth, \$1.50.

This is a collection of short, terse paragraphs detailing the essential facts of radiology. Interspersed throughout the text there are numerous quotations from such well-known physicians as Joseph C. Bloodgood, James Ewing, H. H. Young, Edwin Beer, John O. Polak, William J. Mayo and others, stressing the value of radiology as a diagnostic and therapeutic measure in varying conditions. The book is more for the information of the general practitioner as to the field of radiology than as a guide to the radiologist in his work. The usefulness of radiology would be advanced to a considerable degree and much of the suffering of humanity would be alleviated if every physician were familiar with the contents of this little book.

CHARLES EASTMOND.

Chapters in American Obstetrics

CHAPTERS IN AMERICAN OBSTETRICS. By Herbert Thoms, M.D. Springfield, Ill., Charles C. Thomas, 1933. 90 pages, illustrated. 8vo. Cloth, \$2.00.

An attractive little volume of less than one hundred pages devoted to informal discussion of the beginnings of American obstetrics. Bard, Stearns, Dewees, Holmes, Wright and Channing are presented to us with their portraits. Thoms quotes John Fothergill, "Let us preserve the memory of the deserving, perhaps it may prompt others to deserve," as his reason for writing the book. An excellent reason, an excellent book, and a valuable contribution to our knowledge of early American obstetrics. Easily read, it is of great interest.

CHARLES A. GORDON.

Non-Tropical Sprue

NON-TROPICAL SPRUE. A Study in Idiopathic Steatorrhea. By Th. E. Hess Thaysen, M.D. New York, Oxford University Press, 1932. 258 pages, illustrated. 8vo.

The purpose of this work is to describe the clinical picture of non-tropical sprue, to demonstrate that the disease is identical with the sprue occurring in the tropics and to extend interest in its study.

The symptoms are stated to be fatty diarrhea, emaciation, meteorism, anemia and aphthous stomatitis, running a chronic course with a tendency to relapse. A thorough clinical study is presented based upon the author's experience and a study of the literature. Eight case records of the author are furnished and thirty-four cases found in the literature are commented upon.

With regard to diagnosis the author states that the one condition indispensable in the making of it, is examination of the stools. Failure to do this and to remember that sprue occurs outside of the tropics are the main causes of error. If steatorrhea is found in connection with the other symptoms the diagnosis should not be difficult.

The most frequent confusion is with pancreatogenous fatty diarrhea. The most significant difference in the two diseases is that in pancreatogenous fatty diarrhea stomatitis is generally

absent and nitrogen elimination is increased in the feces, this latter coming from undigested protein. Other diseases wrongly diagnosed have been tabes mesenterica, pernicious anemia, Addison's Disease, tetany with pluriglandular insufficiency, progressive muscular atrophy and chronic arthritis.

It is an excellent book presenting most carefully the picture of a disease the existence of which is but little appreciated.

W. E. McCOLLUM.

Syllabus of Medical History

SYLLABUS OF MEDICAL HISTORY. By Victor Robinson, M.D. New York, The Froben Press, 1933. 110 pages, illustrated. 8vo. Cloth, \$1.00.

Professor Robinson's Syllabus consists of specimen questions (50) and answers used in the author's course at Temple University School of Medicine, Philadelphia. The small volume also includes a characteristically charming essay on Duchenne from his "Pathfinders in Medicine," a specimen Chronology (Goiter), an article on the Photostat and its Value to Students of Medical History, by Charles Perry Fisher, Librarian of the College of Physicians of Philadelphia, a photostatic reproduction (Section on Asthma in Jacobus Sylvius' Morborum internum, from Dr. Morris Hirsch Kahn's "Historical Survey of our Knowledge of Bronchial Asthma"), 21 specimen illustrations of Primitive and Egyptian medicine, an index of names and an index of subjects. There are some blank pages for notes at the end of the volume.

Aside from its value to teachers of medical history, this little book offers to every physician a useful survey of the glorious panorama of medicine from the origin of the prehistoric Medicine Man, and the beginning of historic medicine in the Papyrus Ebers, to our own times.

ARTHUR C. JACOBSON.

Essentials of Pathology

ESSENTIALS OF PATHOLOGY. By C. Russell Salisbury, M.D. New York, The Macmillan Company, 1932. 270 pages. 8vo. Cloth, \$2.00.

The general subjects of tissue pathology, symptomatology, and treatment are considered in this book in a rather broad way. The author has apparently endeavored to limit the discussion to such facts and theories as are of importance to the student nurse.

In the first few chapters, the author discusses disease processes and pathological changes in tissues in a general manner, and thus introduces for the first time the subject of pathology to the inexperienced student. In the various succeeding chapters, he deals with diseases of special organs and systems, and the pathological changes in the tissues are briefly but concisely outlined. The introduction of such a system where all the phases of the disease process are discussed, including the pathological anatomy, symptomatology and treatment, serves certain useful purposes. In the first place, it renders the subject more interesting and more instructive to a student who is a beginner. It also helps to correlate the various phases of the subject. Particular stress is laid, however, on the pathogenesis and the morbid anatomical changes produced in the diseased organ, while the symptoms and treatment are only briefly discussed.

A general review of the book makes one feel, therefore, that it is most suitable for studying purposes, particularly to the beginner who is primarily interested in very elementary phases of clinical pathology and medicine. The simplicity and apparent thoroughness with which it is written makes such a book highly recommendable.

JACOB RABINOVITCH.

100,000,000 Guinea Pigs

100,000,000 GUINEA PIGS. By Arthur Kallet and F. J. Schlink. New York, Vanguard Press, 1933. 312 pages. 12mo. Cloth, \$2.00.

The material contained in this book is not new to the physician who follows the reports of the Bureau of Investigation in the Journal of the American Medical Association. The book is devoted to a sensational exposure of the deleterious and useless ingredients of many nationally advertised drugs and foods that are foisted upon the American public. Every psychological art of the advertising expert is utilized in selling his article, frequently making false claims, and often with a total disregard of the danger to the health of the individual consumer. The authors name and describe 107 standard products that are either dangerous or useless for the purposes advertised.

The title of the book merely implies that 100,000,000 human beings are being employed as animal experiments by manufacturers of food and drug products.

There are innumerable, detailed descriptions of ingredients added to foods for purposes of preservation; bleaching that is of a proven toxic nature but yet permitted to be marketed almost without restrictions. The same is true of cosmetics such as dentifrices, depilatories and hair dyes. The patent medicine manufacturers become targets for serious and sweep-

ing indictments because of their unscrupulous tactics of selling either poisons, narcotics or placebos for very fancy prices. Legitimate drug manufacturers are taken to task for stepping into the realm of selling shadowy products because of their lucrative source of profits.

The authors discuss at length the serious inadequacies of the commission appointed to execute the provisions of the Food and Drugs Act, the meagre funds made available for proper regulation of this important branch of American industry, and make recommendations regarding a better control of what appears to be a serious menace to the health of the nation.

Every physician should be familiar with the contents of this book.

WILLIAM S. COLLENS.

Augenheilkunde des praktischen Arztes

AUGENHEILKUNDE DES PRAKTISCHEN ARZTES. By K. Vogel-sang, M.D. Berlin, Urban & Schwarzenberg, 1933. 121 pages, illustrated. 12mo. Cardboard. Reichmarks 4.00.

This is a brief treatise on eye diseases and refraction.

It is designed as an introduction to ophthalmology for the medical student especially, and fills the purpose.

RALPH I. LLOYD.

The Action of the Living Cell

THE ACTION OF THE LIVING CELL. Experimental Research in Biology. By Fenton B. Turk, M.D. New York, The Macmillan Company, 1933. 308 pages, illustrated. 8vo. Cloth, \$3.50.

This book is concerned with the cytot concept as a theory to explain the effect of environment on the growth of cells. It is founded on experimental work done over a period of years by a worker eminent in the field of biology. Cytot is defined as an endocellular component which under appropriate stimulus, living cells appear to be able to yield, which is capable of both exciting and depressing the activities of neighboring cells. The volume discusses the origin of cytot, its relationship to physiological and pathological processes, and its general significance in the plant world and medicine. It is a rather striking departure from the usual type of medical works published, and its contents merit serious consideration.

MAX LEDERER.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgement of receipt has been made in this column.

THE PRINCIPLES & PRACTICE OF OBSTETRICS. By Joseph B. DeLee, M.D. Sixth Edition. Philadelphia, W. B. Saunders Company, 1933. 1165 pages, illustrated. Large 8vo. Cloth, \$12.00.

NEUROPATHOLOGY. The Anatomical Foundation of Nervous Diseases. By Walter Freeman, M.D. Philadelphia, W. B. Saunders Company, 1933. 349 pages, illustrated. 8vo. Cloth, \$4.00.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume 13, No. 1. (Pacific Coast Surgical Association Number.) February, 1933. Issued serially, one number every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 nos.). Paper, \$12.00, cloth, \$16.00.

NEUZEITLICHE DIABETESGRAGEN. Funktionelle Pathologie und Therapie. By Carl von Noorden. Berlin, Urban & Schwarzenberg, 1933. 56 pages. 12mo. Paper, RM. 2.40.

METHODOLOGY IN THE FORMULATION OF MENTAL HYGIENE CASE STUDIES. By Frederick L. Patry, M.D. Albany, N. Y., University of the State of New York Press, 1933. 73 pages. 8vo. Paper. (University of the State of New York. State Education Department.)

THE TECHNIQUE OF CONTRACEPTION. By Eric M. Matsner, M.D. New York, American Birth Control League, Inc., 1933. 38 pages, illustrated. 8vo. Paper, 50c.

THE PRACTICE OF BIRTH CONTROL. By Enid Charles, Ph.D. London, Williams & Norgate, Ltd., 1932. 190 pages. 8vo. Cloth, 10/6.

THE AETIOLOGY OF TUBERCULOSIS. By Robert Koch, M.D. New York, National Tuberculosis Association, 1932. 48 pages, illustrated. 8vo. Fabrikoid, 50c.

CRITERIA FOR THE CLASSIFICATION AND DIAGNOSIS OF HEART DISEASE. By Joseph H. Bainton, M.D., Arthur C. DeGraft, M.D., Robert L. Levy, M.D., and Harold E. B. Perdee, M.D. Third Edition. New York, New York Tuberculosis and Health Association, 1932. 131 pages, illustrated. 12mo.

THE MEDICAL SECRETARY. By Minnie Genevieve Morse. New York, The Macmillan Company, 1933. 162 pages. 16mo. Cloth, \$1.50.

DISEASES OF THE HEART. By Sir Thomas Lewis, M.D. New York, The Macmillan Company, 1933. 297 pages, illustrated. 8vo. Cloth, \$3.50.

THE HISTORY OF MEDICINE. By Bernard Dawson, M.D. New York, The Macmillan Company, 1932. 160 pages, illustrated. 12mo. Cloth, \$2.50.

CLINICAL EDUCATION IN NURSING. By Blanche Pfefferkorn and Marian Rottman. New York, The Macmillan Company, 1932. 173 pages. 8vo. Cloth, \$2.00.

THE PRINCIPLES AND PRACTICE OF SURGICAL NURSING. By Charles D. Lockwood, M.D. New York, The Macmillan Company, 1932. 344 pages, illustrated. 8vo. Cloth, \$2.75.

CLINICAL PHYSIOLOGY OF THE EYE. By Francis H. Adler, M.D. New York, The Macmillan Company, 1933. 406 pages, illustrated. 8vo. Cloth, \$5.00.

A GENERAL HISTORY OF NURSING. By Lucy R. Seymer. New York, The Macmillan Company, 1933. 317 pages, illustrated. 8vo. Cloth, \$2.75.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, etc. Volume 1, 43rd Series, 1933. Edited by Louis Hamman, M.D. Philadelphia, J. B. Lippincott Company [c. 1933]. 305 pages, illustrated. 8vo. Cloth, \$3.00.

AMERICAN & CANADIAN HOSPITALS. Edited by James Clark Fife, with the cooperation of the American Hospital Association. Minneapolis, Minn., Midwest Publishers Company [c. 1933]. 1560 pages. 4to. Cloth, \$10.00.

THE TIDES OF LIFE. The Endocrine Glands in Bodily Adjustment. By R. G. Hoskins, M.D. New York, W. W. Norton & Company [c. 1933]. 352 pages, illustrated. 8vo. Cloth, \$3.50.

Liver Extract E-29 Valentine With Iron

The feeding of liver in the treatment of anemic patients began in 1925 on the publication of Whipple's work. As early as 1928 it was recognized that feeding large amounts of liver or liver extracts in conjunction with large doses of iron frequently produces a more desirable effect in secondary anemias than is observed from the administration of either alone.

During the past four years a very heterogeneous group of secondary anemias has been treated with E-29 (unpublished experiments of Dr. William B. Porter, Medical College of Virginia) and of this group a large number have responded very favorably. VanderHoof and Davis have shown that satisfactory results are obtained from the use of E-29 in the anemia of the microcytic type observed in middle-aged women. Suarez reported that E-29 gave a reticulocytosis in the anemia of sprue, not only of the pernicious type but also in the secondary types of anemia. E-29 is a simple aqueous extract and contains the water soluble constituents of liver in concentrated form (coagulable proteins removed). It therefore contains the Whipple fraction for secondary anemia as well as the Cohn-Minot principle for pernicious anemia. Other clinical studies have shown that liver and iron combinations produce results which frequently exceed the response in secondary anemia from either liver or iron alone. Many members of the Profession have themselves supplemented E-29 with iron. While some prefer to prescribe these separately, a large number favor a combination of liver extract with iron. As a result of the increasing demand for E-29 with iron, this preparation is being placed on the market.

E-29 with iron contains approximately 2 grams (31 grains) of ferric ammonium citrate per fluid ounce, which provides 325 milligrams (5 grains) of available iron per ounce. Each ounce represents approximately 227 grams (one-half pound) of liver equivalent. It is interesting to note that on analysis E-29 shows the presence of copper.

Chanutin has shown that E-29 is relatively rich in Vitamin B "Complex" when contrasted with other foods already studied.

Liver extract E-29 Valentine with iron is put up in amber glass bottles containing eight (8) fluid ounces net, by Valentine's Meat-Juice Co., Richmond, Virginia.

The Chemistry of Carcinogenesis

It sometimes happens that investigations proceeding along different lines converge quite unexpectedly. The latest developments in the chemistry of carcinogenesis are a case in point. First, the patient work of organic chemists on the chemical constitution of cholesterol and allied substances has led to the provisional construction of a constitutional formula whose skeleton—if one may use the term—is a combination of four rings of carbon atoms. This ring system is completely saturated, each carbon atom having all its free valencies combined with hydrogen atoms. Secondly, work on the sex hormones has brought about the isolation of the follicular hormone, oestrin, which is capable of inducing an oestral cycle in castrated animals; and the suggestion is made that it is derived from the sterols by a process which involves a partial loss of hydrogen atoms with the formation of a benzene ring in the skeleton of the four rings of carbon atoms. Hitherto these views on the constitution of oestrin have been derived solely from analytical data accumulated on naturally occurring crystalline oestrin; but striking support of their correctness has been provided from the purely synthetic aspect by Mr. J. W. Cook, D.Sc., of the Cancer Hospital, and Prof. E. C. Dodds of the Middlesex Hospital, and their co-workers, whose description of the oestrogenic activity of a ketotetra-hydrophenanthren has already been mentioned in these columns. Thirdly, we have the investigations of Prof. E. L. Kennaway and his colleagues of the Cancer Hospital, who have synthesised a number of pure organic compounds capable of inducing cancer when applied locally to the skin. Here again consideration of the known chemical constitution

of these carcinogenic substances has indicated the possibility that they are formed from the sterols present in the cells by an abnormal metabolism involving a similar process of dehydrogenation.

Now both oestrus and carcinogenesis have as one of their essential features cellular hyperplasia. It has been found, too, that the injection of coal-tar which can induce cancer also produces oestrus. The next step was therefore to test whether the several pure organic substance of known carcinogenic activity are capable of inducing oestrus. It was found that two of the most potent carcinogenic compounds, 5:6-cyclopenteno-1:2-benzanthracene and 1:2-benzpyrene, are capable of exciting oestrus. In addition several other pure organic substances, not identical chemically with oestrin, have been prepared synthetically which produced oestrus. This interesting story is told very briefly in two letters to *Nature* (Jan. 14th and Feb. 11th) by Dr. Cook and Prof. Dodds. Their experiments show that there are a number of pure organic substances which can induce oestrus, as there are a number of pure organic substances which can induce carcinogenesis, and that some of these substances are both oestrogenic and carcinogenic. Experiments are now being undertaken to show whether oestrin itself has carcinogenic power.

These findings lend strong support to the suggestion of Prof. Kennaway and Dr. Cook that carcinogenic substances can be formed from the sterols of the cell by an abnormal metabolism; but it must not be concluded that this affects the pathological conception of cancer as being at its inception a local disease. Sterols are present in every cell, and it is quite conceivable that when a sharply localised group of cells is placed under abnormal conditions they may locally produce abnormal products of sterol metabolism.—*The Lancet*.

Calzo

Varicose ulcers are to be benefited by a specially prepared ointment for use in the new ambulatory treatment, according to Dr. H. O. McPheeters in his text "Varicose Veins," third revision, 1931, chapter 22, page 223, wherein he states:

"An ideal ointment for this purpose and the one used and preferred by the writer is CAL-ZO. It very well meets all the requirements."

Calzo is a specialized ointment of Calamine and Zinc Oxide in a *special base*, which is a necessary factor in its effectiveness. It contains mild yet effective antiseptics and astringents. It is cooling and soothing to the open area and is of such consistency that it will REMAIN ON THE DENUDED AREAS AS A PROTECTION, and not permit the rough threads of the dressing to break or destroy the delicate film of new skin which natural healing process forms.

The technique for the treatment of varicose ulcers, according to Dr. McPheeters' method of treatment, is supplied complimentary by the manufacturers of Calzo, the Ulmer Pharmacal Company, Minneapolis, Minnesota.

Plantar Warts

Radium.—This is one of the best methods of all, but for obvious reasons is not within the reach of every case. A ten milligramme plaque is placed over the wart and left in position for from two to four hours, according to the size and depth of the growth. After a week or ten days the wart becomes soft and macerated and separates, leaving a clean dry cavity which rapidly heals, requiring the application of mild antiseptics for a few days only.—Franklin, *The Practitioner*.

Gonorrhoeal and Syphilitic Diseases of the Joints

Zeitschrift Für Wissenschaftliche Bäderkunde, Prof. Dr. Herman Schlesinger.

Dr. Schlesinger writes on the different forms of arthritis having their cause in a gonorrhoeal or syphilitic infection and states that gonorrhoeal affection of the joints as well as late syphilis involvements (arthro-lues tardiva—Schlesinger) are both easily amenable to treatment. Gonorrhoeal arthritis should be treated early by specific vaccines, diathermy and Bier's hyperaemia (but phlegmonous and suppurative forms should be carefully watched for). In chronic cases massage and warm baths are useful. Externally applications of Antiphlogistine show good results. For chronic and obstinate cases baths at different spas are recommended.

